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the MANAGEMENT REVIEW

SEPTEMBER, 1949

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- PRODUCTION
- OFFICE MANAGEMENT
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AMERICAN MANAGEMENT ASSOCIATION

Reduce office costs!

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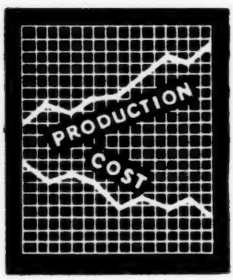

COST REDUCTION is in the air. Office managers are alert to the economic trends and are constantly on the lookout for methods of effecting a reduction of costs in their offices by following the principles of good management.

The recent survey made by AMA in preparation for this Office Management Conference emphasizes the importance of this theme. Office managers are trying to approach their responsibilities in cost reduction with an awareness of its many possibilities, and at the same time avoid pitfalls possible in such an undertaking.

All the sessions of this Conference will deal with cost reduction. They will show how companies have handled their problems, and they will stimulate ideas for widespread application.

To learn of these ideas and to get the inspiration of their effective application, make plans to attend this Conference. Send in your registration to AMA and make your hotel reservations now. The Association is not equipped to handle hotel reservations directly, but a large block of rooms has been reserved for the Conference. They are available upon written application directly to the Hotel Statler.

To non-members who read this announcement, AMA regrets to say that the Conference will be restricted to members of the Association.

Look at these KEY TOPICS

COORDINATING OFFICE WITH COMPANY-WIDE COST REDUCTION • COST REDU TION IN OFFICE SERVICES • THE PARADOX OF MECHANIZATION • NO FILING NO COSTS • SAVING SPACE WITH FUNCTIONAL FURNITURE • MISCELLANEO OPPORTUNITIES FOR COST REDUCTION • AUDITING JOB EVALUATION • A SHO CUT IN PREPARING LISTS FOR PUBLICATION • PROSPECTING FOR COST REDU TION • OFFICE EQUIPMENT CONTROLS • BETTER OFFICE TRAINING FOR CO REDUCTION • USING FORMS TO CUT COSTS • A TREASURER ATTACKS OFFI COSTS • DEPARTMENTAL REORGANIZATION • ECONOMY IN OFFICE METHODS EXPLORING HIDDEN RESOURCES IN THE OFFICE • THE "ROLE PLAYING" TE NIQUE IN SUPERVISORY TRAINING

AMERICAN MANAGEMENT ASSOCIATION
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the MANAGEMENT REVIEW

Volume XXXVIII No. 9

SEPTEMBER, 1949

CONTENTS

General Management

Need 65 Be Time to Retire?

"JOSH" Cameron had worked all his adult life for a Great Lakes shipping company. After 45 years of honorable service as a skipper, he was retired *cum laude*. "Well, what do you know about that?" he exclaimed indignantly. "And I thought I had a steady job!"

Amusing? Try this one:

Irving Kaiser, a spry "youngster" of 67, applied for a job with a lumber company as a master carpenter. "Sorry, pop," the personnel manager told him. "Can't hire anyone more than 50. Against company rules."

Or this:

The vice president of a large corporation retired on his sixty-fifth birthday. Although healthy and active, he had no choice, for his company had a pension plan, had set 65 as the retirement age, and deemed it wise to make no exceptions. So he took up golf, puttered around his garden—and was dead within two years.

The names of these not-so-quaint vignettes of our "retired" classes are not important. You can take your pick out of the 10,500,000 people in this country who are now more than 65, or out of an average of 2,700 Americans who are reaching that age every day. Population experts estimate this figure will be more than 4,200 by 1975.

A large proportion of industry's private retirement plans examined recently by the Conference Board have an arbitrary "get out" rule based on age, and the prevalent age is 65.

But is it true that when a worker retires on pension he can look forward to a contented and secure old age? Should retirement be compulsory even with a pension? And, if so, at what age?

"Death comes at retirement," warns Dr. Roger I. Lee of Boston, past president of the American Medical Association. "The most intelligent of pensioners rebel when they are retired, and lead a miserable existence that cuts short their span of life." Dr. Edward J. Stieglitz, chief of staff of Suburban Hospital in Bethesda, Md., puts it this way: "It is an axiom of clinical medicine that forcing the one-track mind executive to retire is tantamount to signing his death certificate within the year."

Now this is no problem which can be solved by a general raising of the retirement age to keep the elderly worker at work, nor by a general lowering of it to permit him to readjust himself to the conditions of retirement. For the individual tragedies of our "Josh" Camerons, our Irving Kaisers, and our retired corporation executives are rapidly becoming an economic problem of national dimensions.

The weight of our population is shifting to the older group. A century ago, before the decline of the birth rate had made much headway in this country, more than 40 per cent of our population consisted of children less than 15. In 1940, more than a quarter of the nation was 45 years and older. Thirty years

For publishers' addresses or information regarding articles or books, apply to AMA headquarters.

from now, this group will comprise two fifths of the nation, and by the turn of the century—well within the life-span of today's children—at least half the nation will be 45 years old or more. To show the speed of the trend which is unique in our peacetime history: In the decade from 1930 to 1940, our total population increased by 7.2 per cent, but the number of those 65 or more increased by 35 per cent, or nearly five times as rapidly.

These are population statistics, but what do they mean? Well, conservative estimates put our population in 1975 at 185,000,000. In these terms, the statistics mean that by that time there will be not less than 62,000,000 people who will be 45 or more, and nearly 20,000,000 who will be 65 or older. In terms of simple comparisons, we shall have more people past 45 than the total number employed at the present time. If we choose to ignore this aging curve, and if we maintain present working standards and retirement conditions, we shall have a potential labor surplus of more than 30,000,000 workers—with all this means in terms of supporting them through taxing those who are working.

For, to achieve constantly improving standards of living, it is essential that the level of non-producers to producers should be kept as low as possible, in other words that the elderly stay at work as long as they can make a useful contribution.

In New York State, the problem has already become so apparent that a legislative committee under Senator Thomas C. Desmond has been studying the subject from all angles. After listening to the testimony of employers, labor representatives, doctors, psychologists, and welfare specialists, the committee has come up with this recommendation: Birthdays don't count. No man is necessarily too old at 65. He might, in fact, be at his prime then, or even later. He might be past his prime at 45 or 50.

Just how 65 came to be picked on as the age to retire is a mystery. Probably, like Topsy, it just grew and is now firmly rooted despite the fact that times have changed, that life expectancy has also grown. In 1900, for example, which is about when corporations first started private retirement plans, life expectancy in the United States was 49.7 years. It is now 66.7 years—a year more than it was in 1945 and growing rapidly. Moreover, since this takes into account deaths from all causes at earlier ages, those who reach 65 can now expect another 13½ years of life—which is more than four times as much as that estimated on some of the old life policies. And this "new lease on life" is certain to be increased with future improvements in medicine and social services.

Is there sound basis for the idea that chronological age is accompanied by physical and mental age? History and our times are full of examples to the contrary. Two of the world's greatest living conductors, Arturo Toscanini and Serge Koussevitzky are 82 and 74 respectively. Most of the world's elder statesmen are in their sixties or seventies. Verdi wrote his greatest opera "Otello" when he was 74, and "Falstaff" when he was 80. Between the ages of 70 and 83, Commodore Vanderbilt added about $100,000,000 to his fortune. Titian, at 98, painted his masterpiece of the "Battle of Lepanto." Kant, at 74, wrote his "Anthropology," "Metaphysics of Ethics," and "Strife of the Faculties." Bernard Baruch, at 76, represented this country on the Atomic Energy Commission and seems as effective as ever at 78. Root revamped the setup of the World Court

at 84. Edison designed, built and operated chemical plants after he was 67. A great eye specialist in Pennsylvania is as active as ever at 85; a successful surgeon in New Jersey, who is 83, recently performed 20 operations in 24 hours. Active leaders at the bar all over the country are well beyond 70.

There are no exceptions to the rule, for the experts say there is no rule that at 65 mankind suddenly ceases to have any economic value. Aging begins at birth, and even before; and two men at 60, according to the medical specialists, can present 40 years' difference in physiological ages, one having stayed as agile and healthy as a man of 40, the other having aged to 80.

A conclave of psychologists meeting recently in Chicago as the second International Symposium on Feelings and Emotions were told by George Lawton, a New York delegate, that American society, particularly industrial organizations, should adopt the attitude that it is best for the individual and best for society if men and women work as long as they live. Industries, he suggested, should reassign older persons to tasks fitted to their abilities in which they may be even more valuable, rather than retire them when they aren't able to do the jobs they held in earlier life; and the idea of an arbitrary retirement age regardless of fitness should be abandoned.

Many employers are already aware of the problem and think its solution is the joint concern of management, labor, and government. Those queried by Senator Desmond's committee made these suggestions:

There should be job set-asides, whereby certain jobs in plants are definitely set aside for the elderly.

A job classification survey is needed to tell employers exactly what jobs the elderly can do.

Management needs to be more tolerant and loyal to elderly workers. "We choose and select when we hire," said one employer, "and we should do the same when we retire our workers. Some oldtimers can work rings around the younger men."

There should be a revision of the Workmen's Compensation Law to protect employers from liability for pre-existing disabilities.

An industrial-union program should be worked out, permitting "transmotions," "downgrading," or retention of those past retirement age. Senator Desmond's committee recommends that industry, labor, and government develop retirement systems which will not set an automatic retirement age, but will permit and encourage a variable retirement age based on men's physiological rather than chronological ages.

In point of fact, there are cases where a man only reaches his peak at 65 or after.

An example of what this can mean is shown by Hastings College, the law department of the University of California. Instead of retiring faculty members at 65, Hastings will employ a professor for full-time work only if he is 65 or older and has also been retired from one of the other leading law schools. The Hastings plan was started in 1940 because of an emergency shortage of law professors, but it has been so successful that Hastings has not only retained the plan but also has an impressive number of law authorities on its faculty. Its student enrollment is also larger than that of any other law school in the 11 Western states.

By A. Barr Comstock & Sydney Morrell. *Nation's Business*, June, 1949, p. 47:5.

Visitors Are Here

THE frigid impersonality the public too often associates with business can be dissipated if the public can be reached with the story of private enterprise, told in simple, human terms. Many companies, realizing this, have invited the public to visit them on "see for yourself" tours.

One company doing an effective job is Cleveland Graphite Bronze. Through its modern plant, sometimes as often as twice a week, come groups of men and women who leave it acutely aware that here they have a good neighbor. First, visitors are escorted to an auditorium where, after a few introductory remarks, a slide film presents the history and the purpose of the company. Running commentary emphasizes how a farsighted management plows profit back into a business, thus assuring more work, higher wages, better products and at less money.

After the film, guests are assigned to a highly capable guide, mostly in groups of six to eight. Limiting the number of guests to be escorted by each guide makes his story more effective and puts proceedings on an informal basis, so that individual questions can be asked and answered quickly and accurately. Some of the machines bear placards showing their costs, and even a poor mathematician can add up from an eye's sweep the many dollars it took to equip this modern industrial plant.

When the tour is over, the visitor sits down in the company's comfortable cafeteria, where he meets his host, the management. After lunch (or dinner), the company presents a visual analysis of the Cleveland Graphite Bronze sales dollar. It is a round dollar, contrived so that, pie-chart-like, it can be taken apart to illustrate exactly how much is spent in each category of company expenses. That dollar answers questions better than any written or spoken word could do about what becomes of a company's profit. It provides the springboard for a provocative question-and-answer period.

This is the kind of down-to-earth approach that pays off. The plant tour presents irrefutable answers to the attacks of those who favor the socialistic state. And it does more than that—it presents living capitalism in action. Any company can tell an interesting story—its own—and it will find eager listeners.

—*The Informed Executive* (The Associated Industries of Cleveland) 7/1/49

Some Tips for Improving Business Volume

MORE action and less talk by business and government is the remedy for current business ills, according to executives of 387 New York firms surveyed recently by the Commerce and Industry Association of New York.

Most companies were not overly optimistic about the immediate future. Two-thirds reported their gross sales were lower in the first half of 1949 than in the comparable period of 1948. They said they anticipated a drop in the second half. Almost all, however, had plans to combat the expected decline.

The executives said positive action for improving business volume should include these steps: Economize on operating costs, increase productivity, resist unjustified wage increases, reduce prices but avoid predatory price cutting, increase advertising, improve selling methods and plan for plant expansion and modernization this year.

The business men suggested that the government take the following actions: Lower all taxes, reduce spending, reduce or eliminate all unnecessary controls over business, reorganize the executive branch of the government to provide greater economy, establish a far-reaching domestic and foreign economic policy, reduce subsidies and retain the Taft-Hartley Act or substitute a similar law.

—*The Wall Street Journal* 7/12/49

● THE AVERAGE YEARLY INCOME of American households—families and individuals living alone—is estimated in 1947 prices by a Twentieth Century Fund survey as follows: 1929—$3,000; 1932—$2,050; 1940—$2,840; 1944—$4,180. The same survey also shows that *per capita* yearly income, estimated on the same basis, averaged as follows: 1929—$870; 1932—$610; 1944—$1,350.

Our Changing Economy

FEW periods in the history of the world have seen such rapid changes as the last century, and the rapid rate of change is still going on.

One outstanding change has been the increase in productivity. Output per man-hour has been growing at the rate of about 2 per cent a year and output per capita almost as rapidly. Consumption of goods per capita has doubled about every 50 years, and the amount of leisure has also been growing. The increase in output has been faster than was generally expected. If in 1900 someone had predicted that before the middle of the century two out of three children of high school age would be in high school, that virtually every family would own an automobile, radio, and a telephone, that the number of college students would have increased over four times as fast as the population, that all this would have been accomplished after meeting the cost of two great wars, and that it would be accompanied by a 40-hour workweek—he would have been regarded as quite irresponsible. Nevertheless, his forecast would have been accurate.

The second notable change has been the shift in power from business to employees. The best evidence in support of this statement is found in the history of legislation. Most major pieces of legislation, such as the Federal Reserve Act, the Norris-LaGuardia Act, the Securities and Exchange Act, the Wagner Act, and the Social Security Act, were adopted either in the face of opposition from the predominant part of the business community or with little participation by business men in the formulation of the legislation.

The basic reason for this shift in power has been the increase in the relative number of employees. In the early part of the 19th Century, the community was made up predominantly of self-employed persons. The number of employees, however, has been growing far faster than the number of self-employed. Today, over three out of four persons who work for a living in the United States are on someone else's payroll.

The shift of power to employees has been facilitated by two conditions—by the rapid unionization of employees and by the unwillingness of business men to offer constructive proposals for dealing with the problems which have emerged. Had business leaders been willing to take the lead in attacking the problems which led to the passage of the Securities and Exchange Act and the Wagner Act, for example, business men would have retained a substantial voice in policy-making and the country would have been given better balanced and more practical legislation.

The third outstanding change has been the revolution that has occurred during the last 60 years in the economy of the United States. The present economy is quite different from the country's original free private enterprise economy and is based on a different principle. Free private enterprise operated on the principle that ability and willingness to buy determined what was produced and who got it. The new economy operates on the principle that fundamental decisions on who has what incomes, what is produced, and at what prices it is sold are determined by public policies.

Finally, during the last 15 or 20 years there has been an important change in the attitude of the community toward social needs. This change would probably have eventually occurred anyway, but it was accelerated by the great depression of the thirties. At any rate, the community today is

prepared to go much further in disbursing income on the basis of need than it was willing to go in 1929. For example, the United States has since instituted a system of old-age pensions which covers about three out of five workers and a system of unemployment compensation which covers about two out of three employees. It has also taken important steps to increase greatly the opportunities for free public education.

These rapid changes have created many important problems.

(1) The problem of production. If I were to predict that the output per capita of the American economy by 1980 would be about $2,385 (in terms of present dollars), would my prediction be deemed fantastic and irresponsible? This would mean that the average family of four would have an annual income of about $9,540. This is approximately 66 per cent above the present level of income. Possibly $9,540 a year for a family of four seems high. Nevertheless, this rate of growth is only slightly greater than the economy has been accomplishing in the past —namely, 2 per cent per capita a year.

The prospect is that output will increase even faster in the future than in the past. The principal reason for this belief is the rapid growth of industrial research. This is one of the most rapidly booming activities in the community. Expenditures on industrial research increased ninefold between 1920 and 1940, and they are now more than double their 1940 level. The research expenditures by government have grown even faster and now substantially exceed those made by industry. Much of the military research of the national government will produce knowledge that has wide industrial applications. In view of the rapid growth of research, output per man-hour could easily grow by 3 per cent a year. In that event, per capita output by 1980 will be about $3,229 (in terms of 1948 dollars) or about $12,900 for a family of four. Perhaps one-fifth or one-fourth should be subtracted from these amounts to allow for the shortening of the workweek.

I suggest that the community plan for an increase in output of not less than 3 per cent per man-hour per year. The Economic Advisory Council has suggested that the community plan on increasing output by 2.5 per cent per man-hour per year. In view of the huge demands being made on industry by the military program, the welfare state, and the trade unions, an increase of 2.5 per cent per year seems to be dangerously low. Furthermore, in view of the large scale of industrial research and the rapid progress of technology, an increase of 2.5 per cent seems unnecessarily low. Perhaps an increase of 3.5 per cent a year could be attained. Even this would probably not be sufficient to prevent the wage demands of unions from forcing a gradual rise in the price level over the long run. Nevertheless, a 3 per cent rise in output per man-hour would permit a large diversion of product for national defense, social security, and relief and still allow a fairly rapid rise in the standard of living of the rest of the community. Incidentally, it would cause an enormous drain upon the country's resources because it would mean that the total physical output of the nation during the next 30 years would be substantially larger than during the last 150 years.

(2) The problem of working out a basic code or set of mores in the field of industrial relations.

The rapid rise of trade unions confronts the community with a multitude of new problems. For example, it is necessary today for either the trade

union movement or the government to assure that all unions are open to new members on reasonable terms and that no member is arbitrarily deprived of his membership in a union. Similarly, effective ways must be found of protecting neutrals from being drawn into industrial conflicts.

The fact that the wage structure of the country is now set, in the main, by collective bargaining increases the need for criteria to guide the bargainers in fixing wages. Unless such criteria are established, the wage structure developed through collective bargaining will be one that merely reflects the relative bargaining power of unions on the one hand and employers on the other.

Moreover, the rise of trade unions creates the problem of protecting the community from shutdowns which jeopardize the public health and public safety.

The code or system of mores needed to govern industrial relations will consist partly of accepted ideas of what is right or wrong or fair or unfair and partly of legislation and public policies.

(3) The problem of the relation between business and the community. One of the most serious problems of business is created by the small number of stockholders in American corporations and the reluctance of most people to become owners of corporate securities. More than half the industrial capital of the community is held by corporations. The number of corporate stockholders is uncertain. Studies by the Board of Governors of the Federal Reserve System indicate that the number may be between five and six million.

In order for corporations to take root in the community and to become a real part of it, about one out of every three adults should probably become owners of shares in corporations. This would mean about 30 million stockholders. Such an increase could be accomplished only by persuading millions of persons of moderate means to become stockholders. The common stocks of most companies are not a suitable investment for persons of moderate means. Hence corporations should be prepared to offer securities particularly appropriate for persons of moderate means—such as a form of preferred stock. In some instances preferred stocks with special features, such as conversion privileges, may be desirable. The cost of marketing securities in small lots is an impediment to gaining wide distribution of ownership. Consequently, changes in marketing methods are needed. The company interested in obtaining more stockholders will undoubtedly have to bear a substantial part of the cost of distributing its securities.

(4) The problem of greater participation by business leaders in the making of public policies.

How can business increase its influence upon the thinking of the community? The ideas of the community are guided in large measure by a few important thinkers. Many people from all walks of life are attempting to influence the thinking of the community. Competition among ideas is stiff, and—under modern conditions of communication—probably stiffer than ever before. That is a wholesome state of affairs. It has very practical implications for business. It means that business can influence policy by developing great thinkers as well as skilled administrators. It means that the spokesmen for business must be prepared to offer proposals for dealing with the problems which most concern the community. The critics of the economy are today doing the kind of thinking that I suggest executives must

do. Business is confronted with the alternative of letting public policy be formulated almost exclusively by critics of the economy or of developing executives who are capable of competing successfully with other thinkers and winning acceptance for a fair share of their ideas.

From an address by Sumner H. Slichter before the American Iron & Steel Institute (*The Commercial and Financial Chronicle,* June 2, 1949).

How to Give Away Money

HOW does your company handle its donations problem? If you are like most business men, you consider reasonable donations as part of the cost of doing business. But the problem is to figure out how much you should give, and where you should draw the line among the many groups requesting donations. This problem is an especially pressing one today because more groups are after the corporate dollar than ever before. According to one estimate, there are over 5,000 non-profit organizations which need contributions to survive.

A recent Conference Board survey found that 76 large U. S. manufacturers gave a total of $16.1-million to charitable and welfare organizations in 1947. Percentage-wise, their money was distributed as follows: Community Chest, 38; Red Cross, 13; hospitals, 14; education, 13; others, 22.

Here's one company's approach to the donations problem: Standard Oil Co. (N. J.), like most other large concerns, lets local managers decide on contributions to local charities. There's no hard-and-fast rule on how much a local manager may spend, though higher management does review his expenditures. The reason for this decentralization of control is that each local situation differs. In one community, Standard Oil may be the dominant employer and thus may be the leader in contributions to the various community causes. In another, Standard may have few employees; thus its local contributions might be small.

Standard turns the job of handling donations over to an executive full time. He acts as secretary of a "contributions committee," made up of representatives from the budget department, public relations, employee relations, and the secretary's department. Decisions of the committee are referred to the board of directors for approval. But the committee secretary does the spade-work. He finds the answers to such questions as these: What is the purpose and philosophy of this group? How does it fit in with Standard Oil? What do people in general think of it? Is it doing a successful job? Is it duplicating or overlapping the work of some other organization? How do people in Standard use its services? What do they think of it?

Sometimes the secretary prefers not to indicate to the organization that Standard Oil is interested. In such cases, he calls upon the National Better Business Bureau to get financial and other details from welfare and research organizations, and upon the National Information Bureau for details on charitable groups.

Each year Standard reviews the achievements of the groups it helps finance, asks such questions as: Did the organization reach the goals it set for itself this year? If not, why not? Has there been a change in personnel or policy? This practice avoids unpleasant surprises for Standard and helps the groups keep themselves up to the mark.

—*Business Week* 11/6/48

● THIRTY-NINE PER CENT of the people think that advertising makes things cost more in the long run, whereas 30 per cent think that it results in lower prices, according to a recent survey by The Psychological Corporation. Evidently many people do not know or believe that large-scale advertising, like large-scale production, actually reduces prices. Of special interest is the fact that the more highly educated groups covered in this survey seem to have less faith in the economies of advertising than the lower-income, less-educated groups.

Progress Report on Business Growth and Mortality

EVERY business day during the past three years, an average of 2,250 new concerns were added to the Dun & Bradstreet Reference Book of American business. Never had the country witnessed such expansion—widespread commercial development in every section and every line of business. The peak years of the "roaring twenties" never came close to the expansion in this post-World War II period. There were 77 per cent more new concerns established in 1948 than in 1940.

Who made up this new business population? A large part was formed by returning G.I.'s who entered retail lines in great numbers. Many took advantage of their service training and opened up shops of their own. With the gradual availability of merchandise, business men who had been forced to close temporarily because of wartime shortages also made business comebacks. Still others saw the advantage of beginning operations while it was relatively easy to sell merchandise under sellers' market conditions.

Because of wartime shortages and market conditions, the business population in 1944 dropped to its lowest level since 1920, but once the war was over, Americans began to go into business for themselves in numbers never before approached. In 1946, 647,000 new concerns were entered in D & B's Reference Book and in the following year 712,000 new firms were established at the rate of 2,250 every business day.

This was business expansion from coast to coast. New Mexico's business population increased by 88 per cent from January, 1944, to January, 1949. In the same period Florida's jumped by 74 per cent, Alabama's 66 per cent, Texas' 52 per cent, and California's 49 per cent, while the business population of the country as a whole jumped by 34 per cent, with the greatest numerical increase in New York (72,000). California had a 62,000 increase, Texas 46,000, Ohio, 30,000, Pennsylvania 28,000 and Michigan 25,000.

While expansion has begun to level off in most retail lines, the sharpest drops have taken place in those previously showing greatest growth. First industry to show a net decline in the number of firms since the end of World War II was the leather and leather products industry, which dropped to last place in 1947 from third place in 1946. A diminishing rate has also marked the stone, clay and glass industry.

Although widespread expansion has been taking place, commercial failures have been on the rise. Since 1920, an average of 70 concerns out of every 10,000 in business have failed each year. The high point occurred in 1932—with 31,822 failures, or 154 for every 10,000 concerns in operation. Soon after the start of World War II, failures declined sharply. The 810 failures reported in 1945 were less than for any year since 1865.

How long were most of the concerns that failed in 1948 in business? The bulk of them (69 per cent) began operating after 1945, while 89 per cent of them entered the business scene between 1939 and 1948. Less than one-half of 1 per cent of the concerns failing in 1948 were established before 1900. This includes retailers, wholesalers and manufacturers. Chance of failure becomes smaller, usually, with each succeeding year in business. However, while the great bulk of 1948 failures was among the more recent additions to business, it must be kept in

mind that the actual number of failures was only about one-third the 1939 total.

The largest *number* of failures are being reported in the Middle Atlantic states—not surprising since that part of the country is the most heavily populated by business. In 1948, however, the westward expansion of business reflected itself in the failure *rate* in that part of the country. The Pacific Coast now has the highest failure rate—49 for every 10,000 concerns in business, compared with 23 for the Middle Atlantic states, which slipped to third place, behind New England, where 38 out of every 10,000 concerns were failing.

Small business isn't as small as it used to be. It takes a lot more capital to get a business started today than it did 10 years ago. During 1945-47, the average initial investment of a new retailer going into business was $9,500, a new wholesaler, $22,000. But where did the new business man get this capital? According to the Department of Commerce survey covering the sources of funds for 1,000 concerns established in 1945-47, over 45 per cent of the retailers financed their businesses entirely through savings, while an additional 45 per cent used savings as a supplement to other sources of funds.

About one-sixth of the new business men supplemented their personal savings with those of relatives and friends, while ranking second to personal savings was bank credit, which supplied an estimated billion dollars. One out of every four concerns surveyed received bank loans accounting for 12 per cent of the initial investment of all firms and 32 per cent of the investment of firms receiving bank credit. About 3 per cent of the new business men received VA-guaranteed loans for the source of their initial funds. The average bank loan amounted to $3,900.

How long does a business live? In 1939, average age of all retail outlets in operation throughout the country was 12 years. The average age of all general stores with food was 21 years, hardware 20 years, jewelry 20 years, and filling stations and eating places 8 years. Geography has an effect on the life span of a business. In 1939 the average on the West Coast was 10 years, New England 13 years, Midwest 14 years, and in the South Central states 10 years.

From *A Progress Report on New Business Enterprises in the United States.* Dun & Bradstreet, Inc., New York, 1949.

Business Air Fleets

SHARPENED competition is keeping executives up in the air—in their private company planes.

The nation's business-owned air fleet numbers close to 7,000 planes. That's more than the combined fleets of all scheduled and non-scheduled airlines in the U. S. Some 1,300 business craft are multi-engined planes, many of them surplus World War II transports.

Steel, chemical, rubber, and paper company officials rely on their firms' planes to whisk them to conferences, sales meetings, or conventions. Executives can schedule appointments in as many as four cities on the same day with an assist from their private pilots. Department stores find they can speed valuable merchandise to branch stores hundreds of miles away.

The Corporate Aircraft Owners Association, fledgling organization set up by companies operating their own planes, claims the U. S. business fleet has the best

safety record of any type of transportation. The fatality rate for corporate fleets is one person killed for every 200 million passenger miles flown. That rate compares with 1.3 persons killed per 100 million passenger miles on scheduled airlines and 8.53 persons killed per 100 million miles of auto travel.

C. A. O. A. members say their planes are being used more than ever as the business decline has increased the scramble for orders. Increased use cuts the cost of owning a plane—it's an expensive proposition unless the craft is in the air at least 300 hours a year.

With competition growing stiffer, top-level sales executives are turning to company planes to enable them to visit their customers more regularly. Reduced inventories increase the need for closer contact among branch plants, as well as for the occasional transfer of materials and personnel. Speedy delivery of replacement parts by air has won new customers in some instances.

In Wisconsin alone, an impressive number of companies have invested in aircraft. The Parker Pen Co. of Beloit owns two; the Miller Brewing Co. of Milwaukee uses its plane for keeping in touch with distributors, and the Bahr Malting Co. of Manitowoc has two. Other companies in the two-plane class are Armstrong Cork Co., Baker Oil Tools of Los Angeles, Modern Welding Co., of Owensboro, Ky., National Automotive Fibres of Detroit, Skelly Oil, and Reynolds Metal Co.

Biggest problems faced by the traffic men running corporation fleets are the lack of airport facilities and the selection of flight personnel.

With respect to pilots, corporation officials say their crews must possess judgment, diplomacy, and personality as well as the necessary flying skill. Making his passengers feel at ease is a prime requisite for a corporation crew member, they add.

—M. M. Diefenderfer in *The Wall Street Journal* 8/13/49

Insuring a Top-Quality Product

WHEN a business man has invested more than $2,500,000 in laying the foundation for a business, he is naturally impatient to have that business begin to make money for him at the earliest possible moment. Yet in the spring of 1896, when the late Lord Northcliffe, then plain Alfred Harmsworth, brought out the London *Daily Mail,* with his characteristic thoroughness he insured its success in advance. To make certain that the organization would be in good working order on the day of publication, and that his product would be right, he published the paper daily for three months before a single copy was put on sale.

The news was gathered, the type was set, the cuts were made, the forms were stereotyped, the paper was put to press and a few copies were run off. But not a copy was circulated outside the office.

The publisher held a post-mortem with the entire editorial staff over each day's issue, subjecting it to the same rigorous criticism it would have received had it been placed in the hands of the public. During that period he appraised editorial material and writers, studied, changed, improved, added to his staff the ablest newspaper men he could find.

When at last, one day in May, the new morning paper was presented to the British public, the human machine behind it was functioning as smoothly as the great presses which printed it, and the *Daily Mail* had an individuality which could be summed up only in that comprehensive phrase, "the Harmsworth touch."

Impetuous by nature, Harmsworth had deliberately "wasted" three months to gain six.

—*Management Briefs* No. 25 (Rogers & Slade)

● PLANT OPERATING EXECUTIVES of Woodward Governor Company, Rockford, Ill., must attend a mail-opening conference as the first order of business in each day's activity. At these meetings, most of the mail from customers and field servicemen is opened and read by each member of the group. Thus heads of departments are kept informed concerning orders, service problems, and customers' reactions to company products, policies, and servicing.

—*Factory Management and Maintenance* 7/49

Office Management

The Quality of Office Work Can Be Controlled

IN the 1920's, statistical quality control was introduced into American factories—a tool designed to improve the quality of mass-produced items and, at the same time, to decrease their unit costs.

At that time, the proportion of workers in the office as compared to the factory was relatively small. Office applications of the new technique were therefore ignored. Today, however, we find that the proportion of office workers to factory workers in industry has increased to about 25 per cent. With office work in many companies assuming mass-production characteristics, the time has come for the office, like the factory, to utilize the new technique of statistical quality control in order to improve quality and cut clerical costs.

Statistical quality control employs two statistical techniques: the control chart and statistical sampling. Both techniques are based on the laws of probability.

The control chart has been developed in various forms. Essentially, however, it is a device for plotting data, such as errors, so as to show variations from standards or goals. Control limits based upon established tolerance limits are placed upon the chart. Variations that fall within the control limits may be considered as due to chance or unknown causes. Variations that fall outside the control limits are danger signals and indicate that there is a definite, assignable cause at work helping to bring about the variations. The control chart tells the office manager at a glance whether or not his process is in control. As a result, he does not have to dissipate his energies tracking down random variations, but can begin to act the moment an assignable cause appears.

The control chart can be used in the office for many purposes. By plotting the quantity of production on a control chart, the manager can tell when assignable causes are at work which bring about an unusual decrease (or increase) in production. Also, the control chart can be used effectively in connection with worker evaluation and incentive plans.[1]

Statistical sampling is the second technique involved in statistical quality control. Statistical sampling attempts to insure a true picture of the whole by use of a random sample (one in which every item has an equal chance of being inspected) which is at the same time thorough (all variations in the sample are discovered) and regular (recurring consistently rather than at long and irregular intervals). Statisticians have worked out tables so that once the quality goal is determined (e.g., 1 per cent errors allowed) and percentage of errors made by the inspectors is known, the size of sample to be used to insure the quality goal can be determined. In certain cases, the system of sampling permits the use of a larger sample if the variations in the sample taken exceed a specified amount. This method is frequently used when testing the acceptability of purchased items.

[1] Adam Abruzzi, "Applying the Control Chart Method to Worker Evaluation and Incentive Plans," PERSONNEL (November, 1948), pp. 204-210.

Sample inspection has two primary advantages: In the first place, it saves time and money. The size of the sample can be calculated so as to assure the desired degree of quality. To the extent that the sample size represents less than 100 per cent review, there is a saving in inspection time and cost. In the second place, sample testing often results in improving the quality of work. A worker who knows that only a portion of his work is to be reviewed feels an increased sense of responsibility and exercises greater care. Furthermore, experience has shown that the work of the inspector will also be more reliable when he concentrates his attention upon only a selected portion of the items. A 100 per cent inspection is often ineffective because of boredom and distraction on the part of the inspector.

One of the best examples of the application of statistical quality control to clerical operations is found in Aldens' Mail Order House in Chicago. Statistical quality control was begun at Aldens' early in 1945 by the installation of sample inspection and the control chart in one of the order-picking departments. Each order-picking department handles a certain class of merchandise. If a customer orders merchandise from one department only, his order goes directly to that department. If he orders merchandise from more than one department, separate preprinted tickets are made up for each catalog number ordered. The proper color and size are circled on each ticket and the time and place that the order will be assembled in the shipping room is stamped on it. From these tickets the presumably proper item is selected from a stock bin by an order picker; it is then checked by a checker and placed on a conveyor belt which leads to a spiral gravity chute connected with the shipping room.

Statistical quality control was introduced at Aldens' by establishing a sample inspection at a point along the conveyor belt just ahead of the gravity chute and by designing a quality control chart to reflect the number of errors found by the inspector in each sample of 100 work units. This chart (20 in. high, 10 ft. long) showed along the left margin the number of errors made per 100 work units inspected, and along the bottom the days of the month. Circular gummed tabs were used to plot on the proper horizontal line the number of errors found in each sample lot inspected. Within two months after installation in the first order-picking department, the error ratio fell from 3 per cent to less than 1 per cent, while efficiency increased from 82 per cent to 107 per cent.[2] Since then, the system has been extended throughout the organization with such outstanding success that it has gained the complete support of top management. Over a two-year period, statistical quality control brought about a reduction in errors of 25.4 per cent as indicated by customer adjustments.

The Federal Government has made some use of statistical quality control in office situations. The Bureau of the Census, for example, in processing 1940 census figures for housing and population used statistical sampling in the verification of card-punching and maintained quality control charts on each individual puncher. Great care was taken when setting up the sampling system to develop criteria for selecting the punchers whose work should be

[2] Robert W. Jackson, "Quality Control at Aldens'," in *Conference Papers* of the First Annual Convention of the American Society for Quality Control and Second Midwest Quality Control Conference, June 5-6, 1947, p. 14.

sample-verified. Length of experience, average error rate, and fluctuations in error rate were determined to be the controlling factors. Over 90 per cent of the qualified punchers stayed within the upper control limit plotted on their respective charts. Investigation of the reasons for errors in the case of those who exceeded the permitted limit revealed such assignable causes as (1) schedules poorly filled out by the enumerator, (2) a puncher who had returned to work too soon after a siege of measles, and (3) sickness in the family of a puncher. With this knowledge as to the causes of errors, management was able to take intelligent action to remedy bad situations. This statistical quality control system was estimated to have saved $263,000 in direct labor costs; indirect savings were estimated to have paid for the cost of the system. In addition, speedier service in the preparation of the final statistical tables was obtained.

The Federal Bureau of Old Age & Survivors Insurance in Baltimore recently conducted experiments with statistical quality control. One of its minor projects, known as the Advance Sample, consists of tabulating data on a cross-section of about 9,000 workers in order to obtain a quick picture of national trends in employment and wages. By applying control charts and sample verification to the punching of this data for tabulation, both verification costs and error rates were reduced.

Though statistical quality control offers a golden opportunity to the office manager anxious to reduce costs and errors, he must approach its installation with caution. If he is to harness this statistician's Frankenstein, he must: (1) secure competent statistical help, (2) make sure that the installation is carefully planned and sold, and (3) maintain alert and continuous operation of the system.

To date, the major obstacle to more extensive use of statistical quality control in office situations seems to have been the failure of office managers to promote it. Commendable progress has been made in using the technique in manufacturing processes. It remains for office managers to carry on in the vast areas of clerical work which have been relatively untouched.

By WILLIAM R. DIVINE and HARVEY SHERMAN. *The Office,* June, 1949, p. 37:11.

Correspondence Improvement Programs in American Business

ALTHOUGH the relationship of better letters to better business is recognized by many progressive firms, information on current status, techniques and trends in the correspondence improvement programs of American business has been scant. In an effort to obtain such information, a survey of 1,938 business concerns in various sections of the country was recently conducted by the Bureau of Business Research of the University of Texas. Information supplied by 310 of these companies formed the basis for an analysis of emerging trends.

The size of the group in industry interested in improving their correspondence to meet increasingly competitive business conditions may be exemplified by the fact that 84 per cent of the 1,938 leading business houses reached in the survey made no reply, and the further

fact that only 27.7 per cent of the 310 that did reply have or are planning a form of correspondence improvement. This doesn't mean that all companies without formal programs lack interest or fail to see the importance of better letters. Many firms have solved their problem by employing expert correspondents. Others recognize the value of better letters but have done little about it. However, the fact remains that the prevailing attitude is one of indifference.

Twenty-five per cent of the reporting firms have some form of correspondence improvement program. But these programs differ widely. One of the oldest techniques is the use of key individuals to supervise varying proportions of the company's correspondence. Of the reporting firms with programs, 25 per cent have either a full- or part-time employee to supervise the company's letter-writing activities.

The term "correspondence supervisor," as used in this analysis, refers to an individual whose duties consist not only of supervision of the outgoing letters of a company, but also of such activities as training correspondents and determining correspondence standards. In short, he is the director of a comprehensive program. Of all the reporting firms making organized attempts to raise the quality of their outgoing mail, less than 3 per cent employ a supervisor of this type. This is far short of estimates made during the 20's, when 40 per cent of all surveyed firms employing 10 or more correspondents had correspondence supervisors. From all indications it appears probable that the correspondence supervisor is truly a vanishing American.

Many of the firms approached in the survey employ supervisors of correspondence whose duties and authority are limited. Some of these "limited-function correspondence supervisors," as they are termed in the analysis, are in reality department heads or chief clerks whose duties consist primarily of distributing the work, editing some of the outgoing mail, and training correspondents in a limited way—usually through occasional personal conferences. Frequently, though, a training department is available to issue printed training material, engage the services of professional letter-improvement services, conduct group discussions, and the like. Nineteen per cent of the companies reporting programs employ a type of limited-function correspondence supervisor. Possibly use of this type of supervisor is still on the increase. In the past decade 42 per cent of the reporting firms that started programs have employed this technique.

Many companies have centralized the handling of outgoing mail in the hands of specially trained correspondents, either set up in a department of their own or located individually in the various company departments. These people receive, analyze and answer all or specific types of a company's correspondence. This improvement technique is used by 19 per cent of all reporting firms having some form of program.

A technique that has made tremendous gains in the last decade is use of the services of a correspondence improvement agency. These services comprise the whole effort of many companies; others use them as a supplement to one or more techniques. Some agencies hold special classes and conduct letter clinics at their client's plant. Often form letters are designed or criticized for a client. Most services prepare pamphlets, bulletins and films that are made available to the subscribing firm's personnel.

Most companies believe the quality

of their present correspondents' output can be raised through some form of education. All those reporting programs are using some form of employee training. Methods vary widely but may be classified into two general groups: on-the-job training and instruction classes. Some firms use both methods.

Usually on-the-job training is under the direction of a particular individual — the correspondence supervisor if there is one. The trainee is guided by printed material and the personal instruction of his supervisors. Often special courses are conducted through the firm's own facilities under the direction of a qualified employee; or professional teachers are brought in. Some firms provide courses conducted by mail, varying in scope and duration.

Of all the training plans reported in this survey, the percentage of occurrence of the most important subjects is as follows: Standard physical form for letters, 71 per cent; forms for interoffice memoranda, 71 per cent; use of form letters, 76 per cent; use of form paragraphs, 53 per cent; spelling, 12 per cent; punctuation, 29 per cent; grammar, 12 per cent; fresh natural diction, 41 per cent; personality or "style of the house," 35 per cent; viewpoint of the reader, 71 per cent; and company policy, 82 per cent.

All the firms reporting programs have minimum educational requirements for their routine correspondents. High-school education is required by 81 per cent; another 6 per cent require graduation from a business school; and college degrees are requisites in 13 per cent of these companies.

Thirteen per cent of all participating firms currently have plans for a program of correspondence improvement, mostly because of weaknesses in their present setup. Chief among these is lack of uniformity in the handling of outgoing mail, the tendency to use stilted phrases, trite phraseology, and meaningless verbosity, or poor letter construction in general.

How much of today's better-letters activity may be a result of current business conditions and how much the product of farsighted management is difficult to determine. Whatever the cause, the trend of the better-letters movement is definitely upward.

From *Trends, Status, and Techniques of Correspondence Improvement in American Business.* By Raymond V. Lesikar. Bureau of Business Research, College of Business Administration, University of Texas, 1949.

Incentive Pay in the Office

THE introduction of incentive payment systems has helped solve the office production problems of some organizations. To reward each employee according to individual contributions, to offer compensation in harmony with ability and effort through a scientifically set up, and carefully administered, incentive system has been, to some companies, a vital shot in the arm to both office production and morale. Other companies have installed incentive pay systems in their offices and have subsequently discarded them.

To determine current opinion concerning clerical incentives, and to record the results of such systems now in operation, the Office Management Association of Chicago recently surveyed 78 companies with 41,227 office employees. Presented below are some of the salient survey findings:

Seventy-four of the responding companies, with 38,791 office employees, do not

have incentive pay systems. Eleven of these firms reported that they formerly had incentive pay systems in their offices but discarded them for the following reasons: too many gripes; hard to hire people to work on incentive pay plans; too hard to make fair standards; difficult to reward personal qualities; caused decrease in quality; increased turnover; workflow not constant; too much policing; impractical. Seven of the companies that do not at present have a clerical incentive system are considering establishing one in the future.

Four of the responding companies, with 2,436 office employees, have incentive pay systems. Fourteen per cent of the office employees in these four firms are covered by their incentive pay plans. Jobs covered include: clerks, typists, transcribers, file clerks, key punch operators, addressograph operators, and bookkeepers.

The length of service before new employees qualify for incentive earnings varies with each company from two days to one month or "when production warrants." The length of time these four companies have had their incentive systems in use is 1½ years; 3 years; 15 years; and 18 years. Three companies use group incentive plans; one company uses both individual and group plans. Two companies have straight salary wage systems, and two have hourly.

Two companies reported that installation of their incentive system was preceded by time studies; one company, that their installation was preceded by motion studies. Two companies reported that prior to the installations, the plans were introduced to employees by individual interviews, while one company introduced their plan by discussion with department groups.

Clerical Salary Rise Reported

MEDIAN salaries paid to 13 different kinds of clerical workers in 20 cities rose from October, 1948, to April, 1949, according to the semi-annual survey of clerical salaries conducted by the Conference Board. The over-all increases, however, the Board points out, were "considerably smaller" (about 1.5 per cent) than those for the previous six-month period (when they averaged approximately 5 per cent). The latest information collected by the Board covers salaries paid by 533 firms employing 46,932 clerical workers.

Top salaries were reported by three Pacific Coast cities. For six of the 13 occupations covered, San Francisco was paying higher median salaries than any of the other cities surveyed; Los Angeles and Seattle each account for two more of the highest median salaries in the country.

When average salaries of the middle 50 per cent of the employees are considered, the leadership of West Coast cities becomes even more pronounced. In fact, Cleveland, Detroit, and Houston are the only other cities outside the West Coast area reporting relatively high salary levels. In Cincinnati and Louisville, prevailing rates are conspicuously lower than in the bulk of the cities covered.

FALL OFFICE MANAGEMENT CONFERENCE

A Conference of the Office Management Division of the American Management Association will be held on Thursday and Friday, October 20 and 21, at the Hotel Statler, New York City.

Labor-Management Relations in the Days Ahead

TODAY a lot of attention is being focused upon collective bargaining. In many quarters there is grave doubt as to its efficacy and relative sufficiency in meeting the needs of the three groups that have a stake in the collective bargaining process — employees, employers, and the public.

Before considering the nature of those doubts, it is pertinent briefly to recall the various components of that process which is called "free collective bargaining." Basic is the assumption that an "equality of bargaining power" between employees and employer obtains only after the workers are organized.

In many ways, the phrase "equality of bargaining power" has been an unfortunate one. It doesn't connote that the results of bargaining will be "fair and equitable" by some objective measure. Nevertheless, negotiated terms of employment are frequently pointed to as being unfair and hence as evidence of an excessive bargaining advantage in the hands of one side. One party dissatisfied with the results of bargaining naturally feels the process would operate more successfully if the power of the other party could somehow be minimized. From this viewpoint stems many insistent demands upon the government to adjust the economic power of one side or the other in order to assist or to deter the attainment of certain union objectives. It has sparked what I term a "balance of power approach" to national labor policy. Actually, such a policy involves an indirect regulation of the substantive terms of employment themselves. It is therefore incompatible with the fundamental concept of collective bargaining—that unions and management should be free to work out mutually agreeable terms of employment without government direction.

In a collective bargaining system, the term "equality of bargaining power" can be given logical meaning only in relation to job control. A balance of power is achieved when union negotiators possess a power to close down all jobs and thus can match the management power to withdraw the opportunity to work from all employees. Only in such terms have I been able to give reasonable meaning to the phrase "equality of bargaining power" as that term was used in the Wagner Act.

The essence of free collective bargaining is a meeting of minds between organized employees represented by a union and the management. A composition of stubborn differences will ordinarily be brought about, it is expected, first by the equality of bargaining power as just described, and then by the pressure inherent in the rights to strike and to lock out. Self-interest in avoiding a strike or a lockout, which are the ultimate arbitraments, is counted upon to bring about a modification of extreme positions.

A great advantage in the use of economic power as the final arbitrament is that it avoids government-imposed terms of employment and the sanctions necessary to institute imposed terms. A principal danger in its use is that either side, forced to make a settlement

because of economic desperation, but convinced of the gross inequity of the settlement, can submit its case to another forum—Congress. Political power may be called upon to supplant economic power as the final arbitrament.

Collective bargaining thus carries the seeds of its own destruction. These seeds will assuredly lie dormant only if restraint in the use of their economic power is practiced by unions and by management.

Is the collective bargaining system adequately meeting the needs of employees? It has long been assumed that attention to certain primary needs of employees should not be dependent upon the economic power of their unions or on their ability to wring "concessions" from employers. This was evident, for example, when Congress passed the Fair Labor Standards Act and when it enacted Social Security legislation. Collective bargaining is not conceived as an all-sufficient protection for wage earners. And this much seems certain. If the fundamental demands of employees are excluded from the collective bargaining process, they will not thereby be disposed of. Their disposition will be sought in the political arena. In the days which lie ahead, a great concern of those who are charged with industrial relations responsibilities lies in a determination of the scope of collective bargaining and of the relation between collective bargaining and social legislation. Careful consideration of the future role to be played by each mechanism seems clearly to be called for.

Employers have not been entirely sold on the collective bargaining process either. The Taft-Hartley Act, which has had the support of most employers, actually constituted a far-reaching modification of free collective bargaining. Under this legislation, the subjects which must be negotiated are evidently subject to government determination. Such regulations of the scope of collective bargaining have already been made by decisions interpreting the legal requirement of parties to engage in "collective bargaining in good faith." In addition, the procedures of joint-dealing became a matter for government regulation.

It is not at all inconceivable that some of the government-managed collective bargaining introduced by the Taft-Hartley Act will persist even if the Act is ultimately replaced by a new labor law. There is a considerable expression, for example, in support of the continuance of the general requirement that negotiators for both labor and management should bargain collectively in good faith. Depending primarily upon the way such a requirement is interpreted and applied, it could result in a considerable regulation of the scope and of the procedures of collective bargaining. And, of course, that would indirectly have a great deal to do with the actual terms of employment as well as with the kind of industrial relations that prevails. It would probably entail a significant modification of collective bargaining conceived as a process by which employers and unions work out their own arrangements by their own devices.

The general public has been uneasy, too, about the one critical criterion of successful collective bargaining—a meeting of minds by representatives of organized labor and of management. An agreement highly satisfactory to both these parties might nevertheless not give proper weight to consumer interests. There are instances, of course, where unions and management have apparently "ganged up" on the consumer. The instances are often pointed to as evidence of a fundamental error

in the collective bargaining conception. It does seem fair to observe, however, that since such cases are the rare exception and not the general rule, the evidence is far from convincing. And who will deny that, by and large, the consumer interest has been advanced by a system that gains the advantage of that added production which comes from voluntary work and voluntary management.

In a real sense, collective bargaining is on trial in the view of workers, of employers, and of the public. I have always believed that every one of us has a great stake in collective bargaining. I believe that preservation of its values is vital to our conception about the way men should live and work together. This is because collective bargaining provides the only practical and equitable method for arriving at terms of employment acceptable to those immediately affected by them, nor can we afford lightly to dismiss the values inherent in collective bargaining that come from a meeting of minds about terms of employment. That basis of our industrial relations provides the most effective means for high production and assurance of the economic progress which we hope to achieve.

From an address delivered by George W. Taylor at the University of Wisconsin under the sponsorship of the Industrial Relations Center.

Job Posting for Promotion from Within

IN COMPANIES where it is management policy to post job vacancies before filling them, what practices are followed in order to give employees equal opportunities for advancement, and at the same time keep the plan workable from the standpoint of practical placement considerations? For answers to these questions, the Associated Industries of Cleveland recently contacted 25 companies in the area which were known to practice job posting. These companies employ a total of about 30,000 men and women.

Twenty-one of those surveyed said they posted all jobs, whether new or simply vacant. Three companies extended the privilege to their office help, and one restricted it to white-collar employees. Eighteen, however, practice plantwide posting, while three open jobs to the department force first, then to the entire plant for filling. Two companies allow plantwide competition for jobs or restrict them, depending on the job to be filled, and two restrict applications to the department in which the vacancy occurs.

Eight companies keep the job posted as long as necessary, but the others place limits: One company allows 10 days for applications, nine companies allow anywhere from three days to a week, four companies allow 48 hours, and three companies 24 hours for job applications to be submitted.

Only one company considered claimants according to seniority. Thirteen said that seniority was a factor but ability was also weighed. The remaining 11 placed ability first.

In every case but one, workers are placed on new jobs for a trial period. Length of time ranges from 3 to 60 days. If the employee fails to perform satisfactorily during his trial period, two companies replace him at the discretion of management, seven companies re-post the job, 15 select the next claimant in line, and one company has no definite replacement policy.

Occasionally an unsuccessful claimant is disgruntled at management's decision and his anger becomes a grievance, but in no instance has such a grievance been taken to arbitration. Fifteen companies reported such a grievance had never been filed.

Twenty-four companies allow everyone on the seniority list to apply for any vacancy that is posted regardless of length of service. The other company follows the same principle but restricts claimants for skilled jobs to those whose experience qualifies them.

—*The Informed Executive* (The Associated Industries of Cleveland) 6/1/49

Points to Consider Before Laying Off Workers

SLACKENING in business activity forces many employers to choose between two unpleasant alternatives: whether to maintain present schedules and lay off employees, or to cut the number of hours in the workweek and keep the regular workforce on the job. Though first thought must be given to cost and production features—the feasibility of economic operation on a curtailed basis—the labor relations overtones of the problem are vitally important.

Here are a few points you should consider before making your decision:

Will a layoff mean loss of trained workers?

Some companies have already laid off their probationers and employees having six months' or a year's service. Now further layoffs will mean that trained, long-service employees will be affected—with a strong possibility that many will get other jobs during the layoff period. A shorter workweek might be the answer here.

Westinghouse (Newark, N. J.), for example, had already laid off several hundred short-service employees when further reduction of production was indicated. Feeling that the business lull was only temporary, management wanted to keep the rest of its workforce intact. After discussing the situation with union officials, final decision was to operate on a four-day week.

What do the workers want?

Workers in rural or suburban areas are usually willing to go along with share-the-work plans. They know the people they work with and have community contact with them outside the plant. On the other hand, workers in metropolitan areas are apt to insist on their full seniority rights. Social contacts are limited and the general feeling is: "Let Joe take care of himself." It's a good idea to talk the matter over with the union. Or if your plant isn't unionized, tap the trend of employee opinion through your supervisory staff.

What will be the effect on the community?

The reputation of your plant in the community is important. How will it be affected by the method you use to cut production? Will a mass layoff have a disastrous effect on trade in the area? Will it reduce your ability to attract new employees in the future? Will it drain off your manpower to other companies? These are questions each employer must answer in the light of his own circumstances.

Is there an unemployment insurance angle?

The unemployment insurance payroll tax varies for employers according to the number of claims made by persons out of work against state funds. This factor should be weighed with others in deciding whether to lay off workers or keep them on the active payroll on a part-time basis.

Will a cut workweek cause changes in pay practices?

Some companies have worked out ingenious devices to keep pay-practice changes at a minimum. Westinghouse, though operating on a four-day week, keeps the worker's take-home pay the same by giving him earned vacation pay for the fifth day. And Tungsol Corporation (Newark, N. J.) closes down on Monday instead of Fridays to keep payday unchanged and maintain established check-cashing facilities.

The Westinghouse arrangement also has an unemployment insurance angle that works out to an employee's advantage. The company figures that the period of curtailed operations will be over before accumulated vacation pay

is exhausted for the average employee. But if the company is wrong and lay-offs are still necessary at that time, the laid-off worker will be eligible immediately for unemployment insurance benefits.

One thing that can cause trouble if you cut to a four-day week is a provision for daily overtime. If you close down one day a week and then find you have enough work for 35 or 36 hours, you might be stuck for premium rates for the extra hours beyond eight in a day.

A large outfit in northern New Jersey got around this problem neatly. It had a contract clause providing for time-and-one-half rates for hours in excess of eight in one day, but only enough work for a 35-hour week. So instead of closing down one day a week, it cut hours per day from eight to seven.

Employee Relations Bulletin (National Foremen's Institute, Inc.), June 1, 1949.

What's Wrong with Executive Letters to Employees?

EXECUTIVE letters to employees are increasing in quantity. They are not, however, evidencing a like improvement in quality. Such is the verdict of the editors of *The Score,* who recently invited subscribers to submit such letters for analysis.* Presented below, for the benefit of interested executives, are some of their comments.

1. *Biggest weakness is in the copy.* The majority of these letters lack naturalness. In many cases the language is definitely stuffy, lending weight to a possible suspicion in the employee's mind that the boss is stuffy too. Since many such letters go into the home, to be read by members of the employee's family who know nothing of the top official, such stuffiness can have a bad effect.
2. *The jobs are getting too classy.* Like some employee publications, these newsletters are getting too colorful. They are apt to create the impression that they cost a lot of money, even though they don't, and that's a bad impression to create these days.
3. *The text is overlong.* These letters are supposed to be a capsule report of what's going on. The detail is too heavy. Just stick to the simple facts and don't worry too much about the large economic involvements.
4. *The stuff gets political.* Just because you're a big wheel, you sometimes figure you can grind your political axes in print. Forget it. The less said about politics in employee communications, the better.

* April 15, 1949.

Plant Physician's Role Vital to Industry

IF A study recently completed by Columbia University's School of Public Health in New York City is any criterion, the plant doctor plays a vital role in the prevention and early diagnosis of disease among production workers.

The results of the study, which were reported by Dr. Leonard J. Goldwater, M.D., professor of industrial hygiene at Columbia, indicate that in two comparable industrial plants in New York City, the plant which maintains an industrial physician had more than twice as many of its employees visiting family physicians during a year's time as did the plant which does not keep a doctor on its rolls. Specifically, the plant with a physician in attendance referred on to family doctors 17 per cent of its personnel, as contrasted with the non-medical service factory in which only 7.3 per cent employees visited their doctors.

The plants investigated were as similar in make-up and numbers of workers and type of work as could be found. The employees numbered approximately 1,000 at each plant.

Offices for Retired Employees

MOST business men and women who have been going to work every day for 45 years or so are like the old fire horse that hears a bell. They don't want to quit suddenly. To solve this problem for its retiring employees, one Chicago firm, the Peabody Coal Company, has come up with an idea that kills two birds with one stone: It gives retired employees a base of operations from which they can keep their hand in the business if they so desire and, at the same time, it enables them to get adjusted to a new status. The idea: office space provided by the company for the use of retired employees, equipped with a reception room, desks, telephones, and secretarial help. The offices, which are known as "retirement committee quarters," are located down the hall from the company's regular offices.

The idea behind this new plan is threefold:

1. To help the company's retiring business people taper off from daily work into new-found leisure.
2. To give these people a place to transact their own business.
3. To give the company benefit of continuing contacts and judgment from its seasoned employees.

No retired employee will be saddled with any responsibilities, but anyone who wants to keep a hand in will be in position to do it, informally and without pressure.

One of the prime movers of the arrangement was Charles Ellis, a vice president of the company, who noticed that some banks made desks available for their retired officers. One leading Chicago bank, for example, has made desk space available for certain men who want to keep active in civic projects that require a city base of operations. At the Harris Trust Company, moreover, several retired officers put their heads together and rented offices for themselves, without any help from the bank.

The idea has a great deal of merit. If it works out well for the Peabody Coal Company, it should recommend itself to other companies which have retiring men and women who don't want to spend all their time going fishing.

—AUSTIN KIPLINGER in *The Journal of Commerce* (Chicago) 5/9/49

Wages of Skilled vs. Unskilled Workers

LITTLE change has taken place since 1920 in the relationship of unskilled workers' wage rates to those of skilled employees, according to an analysis of wage differentials by skill just completed by the Conference Board. During most of this period average earnings of the skilled and unskilled in 25 manufacturing industries have tended to "move up together." However, in the last few years, the unskilled have fared a bit better than the skilled—"but not, it would seem, at the expense of the latter group."

In 1920, the Board found, unskilled male workers earned $.529 an hour, skilled male workers, $.687. By 1933, averages had dropped to $.401 and $.550, respectively, but by 1948, they reached $1.227 and $1.567, respectively, after 15 successive yearly increases. In the 28 years surveyed, unskilled hourly earnings were usually about three-fourths those of the skilled.

● MANUFACTURING WAGE EARNERS, in the period between October, 1947, and October, 1948, averaged a 9 per cent increase in wage rates, amounting to about 11 cents per hour. Most workers receiving increases in 1948 obtained less than 15 cents per hour, though in the building and printing trades increases of 20 cents or more were common. In general, high-wage industries provided larger increases, widening the cents-per-hour differential between high- and low-wage industries.

—*Wage Movements—Changes in 1948; War and Postwar Trends* (Bureau of Labor Statistics, U. S. Department of Labor)

Framing a Grievance Procedure

THE form and functioning of your grievance procedure can cause gripes to grow into bigger problems—or else move them quickly toward solutions which actually improve plant morale.

First thing you can do is to give your grievance procedure the *broadest scope possible,* at least in the early steps. Main reason for this is that every gripe, big or little, real or imaginary, ought to get an airing. Employees feel better if they can just get a hearing—even if the final answer is "no." The grievance procedure then acts as a "catharsis."

Restrictions on scope are okay later on in the grievance procedure, particularly in arbitration. (It is often thought that arbitration should apply only to questions of interpreting or applying the contract's terms; otherwise, the parties are likely to find themselves arbitrating new provisions.)

An important aspect of the question of the scope of the arbitration clause is its coordination with the no-strike clause. Items over which it is intended there should be no strike should be subject to arbitration so that final settlement is possible under the contract.

The number of steps to be provided in your grievance procedure varies according to the number of plants, departments, etc., to be covered. But there is no point in providing unnecessary steps or a procedure any more elaborate than absolutely necessary. Otherwise, you'll be slowing down the operation of the procedure—a good way to create new gripes.

To test the grievance setup, by the way, see whether gripes are being settled at all steps of the procedure. If there is a particular step at which few or no complaints are being settled, it means that step has become a mere formality—or the grievance representatives at that level don't exercise any authority. In short, the procedure needs streamlining or the representatives need a shot in the arm.

All possible authority should be given to grievance representatives. Otherwise, the procedure is likely to bog down in delays, delaying tactics, and general frustration.

But if, for some reason, authority must be limited at lower steps, for example, the representatives should frankly admit their limitations. Pretense to more authority than they really possess doesn't fool anybody, leads to questions of good faith. (Incidentally, many large industrial plants have been revising their grievance techniques to give lower supervision more authority.)

Time limits for action by the parties at each step of the procedure are advisable. They keep things rolling and prevent inadvertent or purposeful delays. In a word, they "encourage" good-faith relations. At the same time, it may well serve the general welfare of the parties to take more time under certain circumstances, so considerable flexibility and mutual willingness to extend time limits is advised. This automatically minimizes the disadvantages of time limits where the parties' relationships are such that they don't particularly need the protection of the limits.

Regular meetings are an excellent idea, because they allow the parties to nip gripes in the bud, anticipate them,

prepare for them, avoid giving rise to them.

Here again, however, flexibility is desirable. Grievances occasionally arise which should be handled promptly, cannot wait for the regularly scheduled meeting to come around. Provision should be made for handling such cases outside the regular schedule. (In a number of contracts, discharges and suspensions are handled in this way.)

Lastly, provide for careful records. If your unsettled grievances are referred to arbitration, union and management stand to benefit in terms of time, money, and accuracy if the record is available and straight.

From an address by William Simkin, an arbitrator of wide experience, before the Second Annual Labor Conference of New York University (as digested in "What's New in Collective Bargaining Negotiations and Contracts," Bureau of National Affairs, Inc.).

Production Management

Procedure Manual Reduces Errors

PREPARATION of a manual on administrative procedures in the special projects department of the M. W. Kellogg Company, Jersey City, N. J., is paying for itself many times over in improved worker efficiency. Because it gives some 230 technical employees of this department all the rules and regulations controlling their work activities, much wasted time spent in asking questions on procedures or in correcting action begun in error has been eliminated.

The need for such a manual became obvious early in the life of this department four years ago. Despite the fact that a large majority of the personnel are intelligent college graduates, their ignorance of correct administrative procedures led to needless confusion, lost motion, and misunderstanding. Also, it was impossible to brief each new employee in the administrative ramifications he might encounter. During the course of a day's work many questions would arise, such as "How do I order this blueprint?" "How are my traveling expenses handled?" "Where can I get available data on this subject?" or, "Who can authorize this action?"

The administrative manual was designed to answer quickly all such pertinent questions. Secondly, it had to be flexible in content to allow expansion, correction, or superseding changes. This second requirement was met by adopting a loose-leaf method of binding all pages, and numbering them by a simplified Dewey decimal system whereby pages could be readily inserted or removed.

Meeting the demand for easy reference, however, was not so simple. The special projects department encompasses many diversified activities. It studies and issues reports on technical problems in physics, chemistry, electronics, instrumentation, and so forth. It handles design work, experimental fabrication and associated purchasing,

and provision of test facilities for its own diversified items of manufacture.

Despite this handicap of prescribing specific procedures for innumerable activities, an easy-reference manual was achieved by developing it according to the following important principles:

1. *Organization of the manual*

a. Wherever possible, the manual was built around the printed forms (requisitions, engineering orders, purchase orders, time tickets, etc.), which are the tools of administrative procedure. This method was not applicable or even necessary for such functions as files, mail service, and similar services.

b. Separate instruction sheets of one or more pages were issued for each departmental routine. Related sheets were combined in one section, covering a general activity or function.

c. Sections were prepared to cover all major activities of the department and listed in a table of contents for ready reference. Subheads and specific subjects in the table narrowed down the index so anyone could quickly find whatever was wanted. To facilitate reference, an alphabetical index according to subject title was later appended.

Typical of the major functions covered by sections are simple heads like personnel reports, patents and publications, files, ordering, drawings, timekeeping, safety, correspondence, and services. The section on services is subdivided, for example, into subheads like library, keys, telephone, motor vehicles, and the like.

2. *Organization of the instruction sheet*

Key to the easy readability of the manual was the adherence to a consistent method of preparation of each sheet, to make things easy to find. Also, a standard format of the sheet was adopted to identify each sheet accurately as to function, location, authorization, and date of issue.

Every instruction sheet follows more or less this order of presentation of material:

a. Statement, under the heading "Function," of the procedure and explanation of its significance to departmental operation.

b. Description, headed "Preparation," of the printed form to be used, and instructions how to execute it.

c. Instructions, under "Initiation and Approvals," for starting action and getting all necessary approvals.

d. Descriptions, under "Routing and Filing," of the flow of paperwork.

e. Definition, under "Responsibilities," of the authority established for carrying out the procedure.

3. *Preparation of the instruction sheet*

Brevity and conciseness, consistent terminology, and clarity were sought in drafting each sheet. To assure the assembly of complete and accurate information, all personnel concerned with a procedure were interviewed. Elaborate cross-checking helped eliminate any inconsistencies and contradictions.

By adhering to an outline form, with short sentences and liberal paragraphing, the sheet lent itself effectively for use as a quick check-sheet to guide the application of the procedure.

Actual preparation of the administrative manual, containing some 225 pages, involved about 120 man-hours of work in drafting the text and about $100 for paper and printing costs. To keep the manual up to date requires only a few man-hours a month.

Distribution of about 30 copies includes division and section leaders and some staff personnel. Extra copies are available in the departmental library for indoctrination of new employees, and for ready reference by all personnel.

The value of the manual is evident by its general acceptance as an author-

ity on administrative procedures. In consequence, needless misunderstandings and friction have been replaced by knowledge of well-defined responsibilities. Procedures have been clarified, and every man knows not only how far he *can* go but also how far he *should* go, to do his job right.

By JOHN B. BENNET. *Factory Management and Maintenance,* July, 1949.

Do Machine Tools Cost Too Much?

"NEW machine tools cost too much." That remark, in one form or another, is frequent. But everything costs too much, according to the man in the street. Take the automobile as an example. Everyone knows a car costs roughly twice what it did. But General Motors proved in Washington that the 1949 Chevrolet was better than the 1927 Buick in every respect —and $100 cheaper.

Again, George Christopher, president of Packard, said recently that Packard prices are down 53 per cent ($4,650 in 1924; $2,249 today) in the last 25 years, while prices of basic materials have increased percentage-wise as follows: steel 53 per cent, copper 78, brass 93, coal 109, iron 127, lead 133, zinc 169, and aluminum 46. And here's the salient point: A Packard worker had to work 6,577 hours at 71 cents per hour to get the old car, but needs to work only 1,363 hours at $1.65 today for the 1949 car.

In general commodities, values are unchanged, but prices are tremendously increased. This leads to a fallacy in popular thinking about prices, and the failure to balance them against income and relative performance. The like fallacy in evaluating machine-tool prices is the failure to balance cost of new equipment against potential savings.

Just for example: A machine tool which cannot be tooled with carbides, hence would be a less striking example, cost $7,920 in 1939, would cost $13,905 in 1948. The new and improved model, introduced last year, is priced at $15,250—but will do 50 per cent more work than the old. In another case, the old machine sold for $6,835 in 1939, and for $10,855 in 1948. The new model, introduced last year, sells for $15,365—but is 66⅔ per cent faster than the old.

In the first case, the new machine costs 10 per cent more, but does 50 per cent more. In the second, the new machine costs 41 per cent more, but does 66⅔ per cent more. And this is without comparison of labor costs, relative floor space and the like.

With units susceptible to spindle multiplication and carbide tooling, the change is much more appreciable. For example, a drive pinion can now be turned in 8.5 seconds complete—or 17 seconds to floor. Only a few years ago, such a piece would take 20 minutes or more. The answer is principally in reduced labor and handling. And for those who see in this the spectre of "technological unemployment," consider the fact that in 1900 there was no automotive industry, in 1938 it employed 306,000 men in plants, and in 1948 it employed 770,000. That doesn't include the service men, service station attendants, road builders—or, to be

facetious, the tax collectors who collect five cents on every gallon of gas plus $260 tax on a new Packard.

To make a striking comparison of today's machines with models of earlier vintage, let's go back 60 years— to 1890, when carbon steel tools and belt drives were standard. With such a wide spread, it is difficult to give a true comparison. Through the years have come high-speed steel, then carbides; machines have become more rigid, more positive drives and transmissions have been developed, and power has been multiplied many times over. Machines have been "doubled up" — made multi-spindle, several operations combined (i.e., turning and threading) on one unit, or equipped with continuous feeding fixtures. Both tools and machines have been tremendously improved—so much so that even the rather sharp price increases of the last three or four years are more than balanced.

Consider, for example, a car-wheel lathe. In 1890, such a machine cost $7,000 to $8,000. Now it costs $35,000 to $40,000. But the old machine cut at six to nine f.p.m.; the new one will cut at 250 to 300 f.p.m. In other words, cost is *five* times as great, cutting speed *30 to 50* times as great. This is based on wheels ranging from 250 to 365 Brinell, and cuts of 3/16 to 5/16 inch on the tread and up to ½ inch on the hub. Feeds are 0.031 to 0.041 inch per revolution—giving a time on one wheel of 6⅓ minutes—a day's work in 1890.

To draw a more normal picture, let's take a shorter span—25 years—and a couple of common products of a very common machine. First, a screw made from 11/32-inch brass. In 1924, it was made on a Brown & Sharpe No. OG automatic screw machine at a rate of 600 pieces per hour. The machine cost $1,950, was tooled with carbon steel, had a slotting attachment. In 1949, the same part would be made on the new B & S No. OOG automatic screw threading machine at a rate of 3,600 per hour—or six times as fast. The modern machine, tooled with carbide, costs $4,425—or about twice as much. To equal production of the new machine, the 1925 investment would have been $11,700, or 2.6 times as much.

Next, let's take a small steel part, made from ¼-inch stock, with ¼ inch threaded ¼-24 and a ⅛-inch shank 3/16 inches in diameter.

In 1924, the stock was ¼-inch B7B or SAE1112 CRS. The machine was a Brown & Sharpe No. OOG regular automatic screw machine with slotting attachment and attachment belt-driving stand. Production was 290 per hour. The machine cost $1,525, and was tooled with carbon steel. In 1949, the same part would be made of ¼-inch B-1113 or B & S 12-A on a No. OOG high-speed automatic screw machine with motor drive and slotting attachment and carbide tooled. Production would be 1,028 per hour—or 3½ times as much—for an investment of $4,070 —or 2½ times as much. To produce the same output with 1924 machines would require an investment of $5,398.50—or one-third more.

In the first of these two cases—that of the brass screw—much of the gain results from the development of the new specialized screw-threading machine. In the second case, the increase is a result of the great increase in available forward and backward speeds, as well as of such things as carbides, chain drive and self-opening dieheads.

In these two examples, labor has not been considered, because screw machines are operated in batteries, instead of as single machines. Further,

a modern screw machine attains full efficiency only when a rod feed magazine is employed. Figures allowing for these complications would make parallels between 1924 and 1949 extremely tenuous. If you want to make labor cost comparisons, the going rate in 1924 for screw-machine operators was about 50 cents an hour or about a third of the current rate. Based on a conventional total of 50,000 pieces (gross), the brass piece would have required 83.33 hours in 1924, only 13.88 hours in 1949; the steel piece 174.10 hours in 1924, only 48.60 hours in 1949. Assuming a wage increase from 50 cents per hour in 1924 to $1.65 today, labor cost would drop from $41.67 to $22.90 in the first case, from $87.05 to $80.19 in the second.

Comparative figures become extremely interesting if allowances for the change in the value of the dollar are introduced. Let's adjust these last two figures in accordance with the "Purchasing Value of the Dollar" statistics of the Conference Board, for August, 1948. The $11,700 investment of 1924 for the brass piece becomes $16,155.29, and the $5,398.50 for the steel piece becomes $7,454.22. Thus the investment, in 1948 dollars, to equal 1949 production on 1924 equipment would be, respectively, 3.65 and 1.83 times as great.

Suffice it to say that most postwar machine tools are much faster and more powerful than their wartime counterparts. One amusing instance will indicate this development. About a year ago, Bullard Company received an order for five "Cutmaster" vertical turret lathes. The customer, after three were delivered, cancelled the other two. Inquiries brought out that the order had been figured on the basis of wartime machines; the three new ones could do as much as five wartime units.

Mention was made earlier of multiple spindling as a source of savings. Here is a case in point: An automotive company ground the four main bearings of a crankshaft on four separate single-wheel grinders. Each machine produced 60 pieces per day, at a cost of $0.64 per shaft—a total of 240 pieces. A new machine, costing $48,000, now produces 250 pieces per day, at a direct labor cost of $0.16 each. Labor cost was cut from $153.60 (for 240 pieces) to $38.40—a saving of $115.20 per day, or $30,000 per year. Thus the machine paid for itself in 1.6 years, and saved 62½ per cent per year, although the obsolete units were scrapped at no recovery value. In addition, no allowance has been made in this calculation for reduced scrap or recovered floor space.

Such instances might be stacked one atop the other endlessly. They would, however, merely reinforce our initial statement that if you believe new equipment costs too much, you are indulging in a fallacy. You can't meet the competition of tomorrow with the machine tools of yesterday.

By E. J. TANGERMAN, *American Machinist,* September 8, 1949, p. 89:4.

FALL PRODUCTION CONFERENCE

The Fall Production Conference of the American Management Association will be held on Thursday and Friday, November 10 and 11, at the Palmer House, Chicago.

Factory Cost-Reduction Programs

INCREASED expenditures for modernization and expansion of plant and equipment, additions to staff in engineering and research, as well as many other money "outlay" programs are being undertaken to reduce factory costs, according to the latest monthly survey on business practices conducted by the Conference Board.

Most companies surveyed consider the problem of reducing their costs from two points of view: (1) an immediate "housekeeping" effort to eliminate waste and inefficiencies, increase productivity, and take out the frills accumulated in the war boom years; and (2) an over-all, long-range program which, though presently calling for higher expenditures, anticipates greater savings through improved techniques, facilities expansion, and new equipment.

While most companies are reluctant to initiate expansion programs at present, many are stressing improvements which will permit maximum utilization of present equipment and plant facilities. However, some companies feel that now is the time for "relocation of certain operations nearer to consumer markets, sources of raw materials and favorable labor supplies."

Improved labor-management relationships are being "seriously attempted" in an effort to reduce factory costs. As one executive put it, "productivity is the result of a number of well-correlated factors, the most important of which is democratic administration processes which give full play to the teamwork necessary to 'win ball games' against an ever-increasing wage level and other costs." This executive goes on to state: "Some two years ago our hourly wage employees numbered 1,255. Today, we have 300 hourly wage employees. Two years ago, our direct labor cost, based upon the sales dollar, was $.14. Today, our direct labor cost is less than $.06 of the sales dollar. During this period of time there has been an increase of hourly wage rates of $.14 an hour and indirect benefits equivalent to $.04 an hour."

Many companies report that they are currently expanding their research facilities for the development of new products, and methods improvement. Standardization was credited for outstanding cost reductions by many companies. A number of companies reveal considerable interest in the application of quality-control methods to their operations as a means of effecting cost reductions. The survey indicates increasing use within the company of production planning techniques, time and motion studies, hours control, and inventory control. Active suggestion and incentive systems are also gaining wide popularity as a method for improving methods and reducing costs.

Employment Outlook and Earnings in Engineering

ENGINEERING graduates will experience increasing difficulty in finding jobs during the next few years. Job opportunities will increase, however, as the number of engineers swells to 450,000 by the late 1950's. So predicts the Occupational Outlook Branch of the Bureau of Labor Statistics in a study issued recently entitled *Occupational Outlook for Engineers.**

As regards earnings in the engineering field, the study reveals that higher salaries generally are paid to engineers in administration, research, and sales than to those in inspection, analysis, operation, and teaching; that the greatest rise in earning power comes in the first 10 years of experience; that earnings are highest for those with advanced degrees; and that chemical engineers showed a greater increase in earning capacity over time than those in other branches, particularly civil engineering.

* Available from: New York Regional Office, Bureau of Labor Statistics, 341 Ninth Ave., New York 1, N. Y. 11 pages. Gratis.

• DOUBLE TIME if an employee works on his birthday — that's latest in clauses signed between AFL Warehouse Employees Union and the Keystone Brass and Rubber Co. (Philadelphia). Contract also provides that if employee is not required to work on his birthday, he received a holiday with straight-time pay.

—*Employee Relations Bulletin* (National Foremen's Institute, Inc.) 2/28/49

Marketing Management

A New Advertising Medium

A NEW Advertising Medium has come of age. It is the self-service food store, which a majority of American women now look to not only as a place where all their food and many household needs are available, but, more important, as a source of ideas. Ideas on which items to buy, ideas on which brands to buy, ideas for meals, and ideas on how to save money.

A recent study made by *The Progressive Grocer,* with which I am associated, might be called The Decline of the Shopping List. When nearly 700 shoppers were buttonholed and asked whether they carried a shopping list, three-quarters of them carried no list but relied on the self-service store, its departments and displays for buying suggestions.

Thus, in a real sense, the self-service food store has become a new advertising medium—offering untold sales returns to the manufacturer who understands and can harness its tremendous selling potentialities.

What is the daily position of your product on the shelves of self-service stores? Is it on the bottom, middle, or top shelf?

This is a vital factor; depending on which shelf a product occupies, its sales can increase as much as several hundred per cent or can dip down to a mere fraction of its potential.

Some time ago, we ran six separate tests in self-service markets. The results of two will indicate the extent to which shelf position influences sales, despite heavy consumer advertising.

The first test involved two leading bar soaps. During the first week, Brand A occupied the waist-level shelf, and Brand B was on the bottom shelf some eight inches above the floor. Sales were recorded after one week, then the positions were reversed and sales recorded again. Brand A sold 73 bars when at waist-level, but only 37 bars from the bottom shelf—a decrease of 49 per cent. Brand B sold 17 bars from the bottom shelf, but 25 bars from waist-level, an increase of 47 per cent.

When one widely advertised coffee, Beech-Nut, occupied the eye-level shelf, sales were 44 packages in one week, but when it was on the bottom shelf, sales were only eight packages—a sales decrease of 82 per cent. Another brand, Maxwell House, sold 24 packages from the bottom shelf and 33 from the eye-level shelf—an increase of 37½ per cent.

A retailer in Indiana tested his customers in an unusual way. He advertised a leading coffee at 51 cents a pound, but instead of putting his advertised special in the preferred position, he displayed the 1-lb. cans at 51 cents on the bottom shelf. On the top shelf he displayed 2-lb cans of the same brand, but at $1.07 a can (53½ cents a pound). What happened? In three days customers bought 96 2-lb. cans (192 pounds) at $1.07 a can, while, 72 1-lb. cans were sold from the bottom shelf at 2½ cents a pound less than the 2-lb. price. Shelf position is important in this new advertising medium, just as position and size are important on the printed newspaper page.

Does your package enable the mer-

chant to make a price imprint clearly and easily, and do store checks indicate that your product carries a price mark in most stores?

To find to what extent sales depend on price-marking, a test was made in four stores. For one week when no prices were marked either on the packages or on the shelf moldings, the sales of 12 items were recorded. The following week, sales were recorded for the same items in their same positions but this time clearly price-marked. Some of the findings are tabulated below:

WEEK'S SALES

	All Items Price-Marked		No Items Price-Marked	
	Units	*Dollars*	*Units*	*Dollars*
Ketchup	216	$49.68	71	$16.33
Pineapple	52	17.16	23	7.59
Pickles	63	22.05	28	9.80
Peanut butter	49	16.66	16	5.44

How much and what kind of special display does your product get in self-service food stores?

Some advertisers say the expansion of self-service means there's no more value in special displays. To learn the dealer's attitude toward special displays and his facilities for carrying on display programs, we mailed a questionnaire to over 1,000 merchants. The results: All stores were planning to do more display work than ever before; self-service stores were more interested in special display work than counter service stores; and the spacious self-service store arrangement was better suited to displays than the crowded counter service stores.

To check on these answers, our research men examined 49 self-service stores and found 1,001 feature displays —more than 20 special displays per store. And nearly seven out of eight of this total were built by dealers and clerks, and the dealers reported that they change these displays weekly.

The successful merchant today will use displays built around ideas that are simple and quick to get across, and that make sense to the consumer. Displays that offer the customer good ideas, he has learned, are multiple-item displays—embracing two, three or four items. He prefers these to single-item displays, moreover, because they sell more merchandise per square foot and enable him to feature more products.

The Progressive Grocer ran actual tests to compare sales from a multiple-item display with single-item display sales. Four regular display spots were selected. The first week of the test, one display featured a single brand of soap powder; a second display spot featured a single brand of shortening; a third featured a single brand of cold cereal; and a fourth featured a single brand of canned tomatoes. After one full week, sales from each display were carefully determined.

Then, one week was allowed to elapse so that consumers could eat or use up any special extra purchases they might have made as a result of the first week's displays. During the third week, each of these identical display spots, using the same amount of floor space, featured three, four, or five brands and sizes of the same products. The item displayed singly the first week was included in the multiple-item display of the third week.

What happened? The multiple-item displays, in exactly the same position and occupying the same size sales areas as the single-item displays, sold more than three times as much. In the four multiple-item displays, sales totaled $392.27 compared with only $140.30 from the single-item displays.

During these tests, no special signs were used, and no price reductions were made from one week to the next. The fact that in every one of the four tests the multiple-item display outsold

the single-item display by a wide margin proves that the former technique is the superior method.

In conclusion, there are three fundamental goals that every food merchandiser must keep in mind if he is to get his fair share of the self-service store volume: *First,* he should strive for good display position and frontage in regular shelves and gondolas. *Second,* he should see to it that his package is easily price-marked in the store. *Third,* he must make suggestions for special displays that do not require abnormal dealer purchases, but do embrace ideas that will impress the dealer and consumer because of their simplicity and sense.

By ROBERT W. MUELLER, *Printers' Ink,* December 10, 1948, p. 33:4.

Consumer Buying Plans Hold Tips for Advertisers

THIS year's prospects for consumer purchases of durable goods and houses are encouraging, despite the fact that recent sagging sales have been giving many business men the jitters. So said the Federal Reserve Board recently, when it released the findings of its study of consumer finances and buying plans for the first quarter of '49.

The survey, which was conducted for the Board by the Survey Research Center of the University of Michigan, involved 3,500 interviews in 66 sampling areas scattered throughout the United States. Figures are based on consumer units, which the Board defines as "all persons, living in the same dwelling and related by blood, marriage, or adoption, who pooled their incomes for their major items of expense."

Here are a few of the survey highlights on how much and what durables consumers plan to buy this year:

New cars: 3.6 to 5.1 million planned to spend \$7.5 to \$10.6 billion on new cars; last year 3.1 million consumers spent \$6.6 billion on new cars.

Used cars: 1.9 to 2.8 million expect to spend \$1.4 to \$2 billion, compared with last year's actual outlay of \$4.9.

Houses: Some 2 to 3 million consumers planned to buy new or existing (non-farm) houses; over 1 million wanted new homes.

Television and Radio: Twice as many consumers (or 1.4 million) plan to buy television sets as last year; 1.9 million spending units plan to buy radios, 4.8 million actually bought sets last year, although only 2.3 million planned to.

Refrigerators: An estimated 2.9 million hope to buy refrigerators this year, which is close to the 3 million demand at the start of 1948, but under the 5.4 million who actually purchased in 1948.

Washing Machines: This year 1.4 million expect to buy them; last year 1.5 million planned to buy washing machines, but exactly twice as many actually bought them.

The Board sounded a note of warning in comparing 1949 buying plans with actual purchases last year, because "It appears that consumers do not effectively plan their purchases for as long a period ahead as an entire year."

The Board suggested that in order to tap what it described as "latent consumer demand," many manufacturers, distributors and retailers would do well to undertake more aggressive merchandising programs, in terms of producing and selling products "of the price, style, and quality that consumers are able and willing to buy."

—*Tide 6/24/49*

● SOME UNION LEADERS have stated their belief that another wage increase would improve business and increase employment. The Psychological Corporation sampled public opinion on this question from coast to coast, found that, of 5,000 people surveyed, 69 per cent thought a wage increase now would not help. Fifty per cent, however, thought price decreases now would help.

Controlling Sales Promotional Expenditures

CONTROLLING sales promotional expenditures is a tough job. There are intangible factors involved which cannot be measured. For example, it would be difficult to determine a dollars-and-cents value for billboard advertising and nearly impossible to prove that the dollars spent for billboards were more profitably employed than they would have been had they been used for direct-mail promotion. Nevertheless, sales promotion funds can be used more effectively if a constant check is made at certain points.

The Budget. Sales promotional activities should be budgeted as carefully as national advertising, accounting, production or any other activities of a going business. A budget serves as a check on quick enthusiasm. Too often a red-hot idea will occur to someone in the middle of the season and be jammed through ahead of regularly scheduled promotions. The subject is likely to be reviewed more critically and carefully, however, if analyzed in terms of what must be dropped to make way for the brainstorm and still keep within the budget.

Another advantage of a budget is that it requires an analysis of each type of presentation used in terms of the quantities planned. For example, a 4-color leaflet will be extremely expensive if it is to be printed in small quantity, but the cost per copy will be much less if it can be spread over an edition of a million.

Record Keeping. Just as budgeting in advance is helpful, record keeping as the basis of a "post mortem" after the campaign can be used to avoid errors in the future. The Cory Corporation recently analyzed the results of a large expenditure for live demonstrators and found that the added volume was not enough to justify the cost. As a result, the company set up self-service merchandisers in the lower-volume outlets which will not be nearly as expensive in the long run as weekly salaries.

The type of records kept will naturally depend on the distribution channels used. One company whose salesmen sell direct to users has space on its territorial sales control sheet for recording number of calls, volume sold by product, and total cost of all sales promotional materials shipped into the territory. In this way variations either in total cost or as a per cent of sales can be spotted at a glance.

Reliance on records can, of course, be carried to extremes. That a particular kind of promotional effort was well received in the sellers' market of 1945 is no proof that the same appeal will be successful in a price-conscious buyers' market. Further, long-term trends must be considered; as the tendency toward self-service grows in more and more kinds of outlets, it is probable that promotion with a self-service twist will do increasingly well.

Preventing Waste. A contest for distributor salesmen will probably fail unless its sponsor has taken the time and effort to convince the distributor that the contest will be a good thing for his business. Just as a definite budget should be set up for this preselling, so should a definite time schedule be followed. In the case of a distributors' salesman contest, the "presale" should begin at least a month before the contest opens.

Some companies simply produce too much promotional material. One or-

ganization which sponsored four major retail promotions a year found that it was getting only limited dealer backing. Investigation showed that the amount of work involved in participating was in the dealer's opinion excessive. The company now produces just three promotions—for spring, fall and Christmas—and has found that its distributive organization can absorb these.

The very complicated line of promotional materials usually develops in companies which have a long product line. Chrysler Airtemp solved the problem by putting samples of all promotional pieces for each type of product in separate envelopes. The dealer can refer to the appropriate "Sales Kit" to see what is available for the type of promotion he is planning.

There are certain obvious ways which can be profitably employed by a manufacturer to reduce the leakage in his materials costs resulting from dealer waste of sales aids. As a starter, analyze the value of each item in the promotional line. Such a review will often indicate that certain items can be dropped entirely and others combined for both greater economy and greater efficiency.

Analyze the size of the order for promotional materials. An overoptimistic dealer may order 5,000 copies of a catalog in a territory which has only 2,000 prospects. A company unable to develop market research data on its total potential can at least keep a running record of sales and orders for promotional materials and check on any discrepancies over a period of time and from user to comparable user.

Direct mail, properly used, is the ideal medium for controlling the type of prospect who will receive the more expensive promotional materials. A close second is the use of inquiry coupons in advertising; these often require the prospect to send in a dime or a quarter as a token of genuine interest.

Sales aids are often used in the wrong way. In many cases this type of waste is directly the fault of the sponsor. A paint manufacturer, alarmed at the rate at which color-chip folders were being used, found on investigation that dealers were giving them away to all comers because they had no wall-hung display showing the colors. The manufacturer issued a rather expensive wooden display board. After the dealer had used the board instead of the folder 20 times, the board was paid for.

Cooperative Advertising. There is a growing feeling among manufacturers that sales promotional expenditures can be controlled far better if the dealer or other user has a personal investment in the materials. Policies in this matter are far from standardized. However, the manufacturer usually absorbs all national advertising expense, makes some charge for the major portion of his promotional materials, and charges full cost—less, of course, the discount resulting from his quantity purchases —for such items as direct-mail programs, expensive premiums, uniform display cases, elaborate or permanent self-service merchandisers, and so on.

A standard agreement covering the terms of cooperative advertising plans has come into almost unanimous use. These agreements stipulate the share to be contributed by each participant, the media in which the money may be expended, limitations on the time period in which the money must be spent, methods to be used in checking, a statement of the times at which the dealer is to be reimbursed, a listing of what the dealer must or must not do in his advertising to keep in line with company policy, and provision for cancellation of the agreement by either party.

For several years there has been a tendency for manufacturers to assume more and more responsibility toward their customers. A number of promotional programs have been set up which have no direct connection with the sales of the sponsor's goods, but are instead intended to strengthen the customers as business men. The idea is that strong customers—particularly retailers—will buy more goods and move them. Under present laws there is no reason why these generalized programs cannot be sponsored by an industry-wide group rather than developed and in all probability duplicated by individual manufacturers.

From *An Exchange of Management Experience* (Dartnell File S-8: Sales Promotion), The Dartnell Corporation, Chicago. 20 pages.

Sales Promotion Programs for the Buyers' Market

WIDESPREAD intensification of sales, advertising, and promotion efforts in anticipation of keener competition is indicated by a recent Conference Board survey to determine company advertising and sales promotion plans. An increase in personnel is being coupled with intensified training in a move to reacquaint salesmen with sales methods and to bring them up to date on new products.

All but a very few companies state that advertising expenditures for 1949 will be the same as or higher than in 1948. About one-third of the respondents say they are increasing their advertising and sales promotion budgets—some to the extent of 30 to 50 per cent over last year. A heightened interest in new media is indicated, while many report a shift in emphasis from "institutional" to "product boost" advertising.

Almost all the reporting companies which are revamping their sales organizations report that they are giving a great deal of attention to sales training. They have developed comprehensive training courses designed to stimulate the salesmen, instruct them in selling techniques, and equip them with technical knowledge of the products to be sold.

Most cooperating executives report that the rapidly growing buyers' market is causing greater concentration on advertising programs for the ensuing year. Ninety per cent of the companies report advertising expenditures for 1949 equal to or higher than those for 1948. Increases up to 50 per cent over 1948 levels are indicated by a few companies. Boosts in budgets are based on rising rates for some media, the use of additional media, shifts from one medium to another, and expansion of present advertising policies.

Executives also report that close watch will be kept on the effectiveness of the media used.

A definite trend toward increased use of direct-mail advertising is indicated, especially by capital goods industries. Part of the swing from trade-journal to direct-mail advertising is accounted for by the development of new products. Executives believe that direct mail aimed at the particular industries for which these products have been developed will prove to be the most effective method of advertising.

Making Employees Effective Product Boosters

MOST employees are genuinely interested in the results of their work and in the progress of the firm that employs them. Because of this interest, they will become effective salesmen for their company's products if they are given the facts about the products and some experience in using them. Reasoning thus, the management of Lever Brothers Company, Cambridge, Mass., embarked recently on a program of merchandising Lever products to their employees via the company's employee magazine.

Since the adoption of this program, the *Lever Standard* has been concentrating

on gaining employee cooperation in promoting the company's products by telling the story behind all new products and providing each employee with a sample.

In the January issue of the magazine, a return post card was used in conjunction with the national introduction of the company's newest product—the Rayve Home Permanent, produced by its Pepsodent Division. A free Rayve kit was offered if the card was returned; response from employees was 85 per cent. Employees were asked for support with this copy: "You too can be a salesman for Lever. . . . After you have found out how good a Rayve Wave is, tell your friends about it."

The April issue offered a free copy of the new Spry cookbook, fourth edition of this famous cookbook which has gone to more than 15 million people.

In May, the magazine received "Highest Award" of the International Council of Industrial Editors as one of the top employee publications in the United States and Canada.

The May issue highlighted the psychological appeal of perfumes and particularly of Harriet Hubbard Ayer's new line of Golden Chance perfume and other cosmetics. Realizing that the employee's best introduction to the new scent would be by smelling it as well as reading about it, Editor Jack Barnes studied methods of accomplishing this. Perfumed ink was discarded because of technical difficulties in the drying of the ink on the smooth-coated paper stock and the likelihood that the odor would not retain exactly the various "notes" in the Golden Chance scent. Instead, a sachet of Golden Chance powder was inserted inside the front cover of the magazine.

On the front cover, the perfume was pictured in four colors, along with some spring flowers. The headline—"Spring Is in the Air"—set the theme for the issue. Opening to the inside front cover, the reader was greeted by the headline "Yes, Spring is in the Ayer Line of Golden Chance," at the same time that he could smell the scent from the tissue-covered sachet of powder.

On the inside cover, a picture of the complete line was combined with the following copy: "Golden Chance carries a hint of the mid-May fragrance of lilac—the first memorable odor of spring. It carries, too, the fragrance of the later summer flowers—the rose, the tuberose, the lily."

Inside was the perfume story based on the idea that perfume is "a fond remembrance of things past." It explained that perfumers credit the liking for any particular perfume scent to its association with pleasant memories. Such memories may be the sharp fragrance of newly cut hay; the odor of baking; lilacs in the spring, present in nearly every popular perfume; and even such odors as the fragrance of tobacco, the smell of burning leaves and the odor of leather. The story then told how the Golden Chance fragrance was compounded and the proper uses and application of perfumes. Other features presented the historical background of the Harriet Hubbard Ayer concern, the steps in production, and the sales program.

Plant and Office Workers Study Each Other's Jobs

PLANT and office personnel at Refined Syrups & Sugars, Inc., Yonkers, N. Y., have interchanged visits to develop a better appreciation of each other's jobs. Moreover, an understanding has grown of the way in which all the tasks at the refinery are directly or indirectly interrelated.

The company recently conducted a six-week program whereby foremen and supervisors from the plant visited the office in groups of four. Each group spent an entire week observing departmental operations. They sat in at officers' meetings and lunched with executives.

Simultaneously, groups of office workers toured the plant to observe first-hand the actual manufacturing process and refinery operation.

—Factory Management and Maintenance 6/49

● A TWENTIETH CENTURY FUND survey says that women will probably outnumber men in the United States by about 700,000 in 1960.

Financial Management

Keeping Productive Capital Intact

FINANCIAL termites are gnawing away under cover of profit-and-loss reports that proclaim most companies in better shape than ever in their history. Record volume and lush earnings conceal the dangers of under-depreciation and lagging replacement of equipment.

For the great majority of companies, real capital—modern plant and equipment, plus the financial strength to keep them husky—is far below prewar standards.

Companies have been falling into one or both of two pitfalls: Too many managers have failed to reckon with the high replacement cost of equipment in a period of inflation, and will find themselves in a jam when they have to meet replacement needs. And too few managers have given full weight to the wear on plants of years of peak operations, or to the rapid, outmoding pace of technological advances.

Plant managers see the need for new, more efficient equipment. But financial officers don't see enough money in depreciation reserves to buy it, and wince at the price tags.

The arch villain who has shoved management smack in between the devil of high capital charges and the deep blue sea of obsolescence has the long name "underdepreciation." Depreciation charges based on the relatively low original cost of present equipment have led to overstatement of profit and understatement of true cost when based on prices of new equipment.

Today's record corporate earnings stem in part at least from this freak economic change. Judging from the estimates of those who have studied the question, current depreciation charges are from 50 to 100 per cent below what they would be if figured on replacement costs. And in far too many instances the excess earnings have vanished as dividends.

Many managers are letting out-of-date federal tax regulations and the accountant's definition of depreciation act as mental bars to doing anything about these problems.

Neither of these obstacles should prevent companies from getting their houses in order—from gearing their thinking and their real reserves to avoid the twin dangers of underdepreciation and obsolescence.

The financial problems involved and their solutions are traced below in terms of a single machine. This discussion skips many of the accounting technicalities, but the principles involved in one machine apply as well to a large plant.

1. *Underdepreciation.*

To illustrate the ailment of underdepreciation, suppose that the 1939 price tag on Machine X shows the following figures: Cost, $10,000; Appraised Value, $10,000; Replacement Cost, $10,000; Annual Depreciation, $1,000. The 1949 price tag, however, shows: Net Book Value, 0; Appraised Value, $15,000; Replacement Cost, $20,000; Annual Depreciation after Replacement, $2,000.

Thus as of today the book value of the machine is zero, the depreciation reserve amounts to $10,000. In normal times, immediate replacement would be

desirable and painless. But prices have climbed. The cost of an identical new machine is now $20,000.

Correct accounting practice, as defined by the Institute of Accountancy, limits depreciation solely to the recovery of original cost, making no provision for replacement. But as a practical matter, the reserve account is $10,000 shy of the cost of replacement. Further, the owners of this machine have been understating costs by $1,000 a year—the difference between normal depreciation on the old and the new cost. After replacement, this additional $1,000 must be made up in a higher selling price or lower profits.

First step in curing this ailment is to focus management attention on the real problem. Tax considerations and strict accounting definition must give way to the stern fact that provision for replacement of worn-out or obsolete plant and equipment is a prerequisite to staying in business. Accounting and reporting methods may differ; the objective remains the same.

Some companies now carry an extra depreciation charge on their operating statement—the extra ranging from 30 to 100 per cent of normal depreciation, and reflecting the differences between original and replacement cost. This has the double advantage of providing for future replacement and of presenting more realistic cost figures. This method is not accepted by the SEC or the New York Stock Exchange, however, and therefore cannot be used by companies with listed securities. But companies in this situation can get the same result, as far as provision for replacement is concerned, through a direct charge to net earnings or surplus.

2. *Financing Replacements.*

The ailment: Footing the bill for needed replacements is a puzzle for many managers either because of underdepreciation and the consequent failure to provide adequate reserves, or because of the all-too-common fact that reserve accounts, no matter how generous are not necessarily offset by an equivalent in cash.

In theory, depreciation should recover the original dollars, and the balance sheet at the end of 10 years on Machine X should read:

	Assets	*Liabilities*
Cash	$10,000	
Machine	0	Reserve for depreciation, $10,000

The original cost is fully recovered, and the cash is at hand for replacement expenditure. But the average balance sheet is far more complex; and the reserve account may be offset by other capital assets such as equipment, by inventories, or even in the form of reduced loans. In many cases then, financial management must not only dig up the extra cash for today's high replacement cost, but also uncover enough liquid assets to match present reserve accounts, and still take care of current needs for larger working capital.

The cure: Unfortunately, no magic wand can produce enough cash to make up for past omissions. The ideal goal might be to carry funds for replacement in a special account, or invest them in government bonds. The more practical compromise is to budget equipment needs as far ahead as possible, and lay a financial course today that will find the company prepared to pay when the need arises.

Managements especially pressed for cash today may find a partial solution to their replacement problems in the high second-hand values for some existing equipment. On Machine X, for instance, if the appraised value of $15,000 is approximated in the market value, proceeds from its sale will go

a long way toward paying for the replacement. There will be a capital-gains tax to be paid on the difference between sales price and net book value (in this case in the full $15,000), but this may be far smaller than the penalties of early technological obsolescence.

3. *Cutting the Risk in High-Priced Equipment.*

The ailment: Even when the new machine is paid for, the problems of the financial manager are not ended. His dilemma is suggested by Machine Y, on which the price tags read as follows: *1949*—Cost, $20,000; Annual Depreciation, $2,000. *1954*—Net Book Value, $10,000; Replacement Cost, $15,000; Annual Depreciation after Replacement, $1,500.

Since today's high prices may decline, what happens if the price of Machine Y is down 25 per cent five years from now? This poses two problems: 1. A competitor buying a new machine in 1954 enjoys the advantage of lower depreciation charges, and the modest $300 in the case of one machine might be a significant advantage if multiplied by scores of machines. 2. Financial risks in sudden obsolescence are greater with higher prices. If Machine Y had to be replaced quickly in 1954, an item of $10,000 (its net book value) must be written off. Erasing this from the books will be painful at least.

The cure: The solution to this dilemma is one now being employed by several leading companies. Their practice is to write off as much as possible of today's extra cost in as short a time as possible. And this should be done, whether or not the plan selected has the approval of the Treasury as a deduction for income-tax purposes. Here's the advantage: If the assumed "extra" cost today over 1954 ($5,000) is written off immediately against current high earnings, or over the first two years, the picture five years from now is materially different. First of all, annual depreciation charges will be in line with those a competitor might enjoy with a new machine. Second, the book value in 1954 would be $5,000 instead of $10,000; and the reserve for depreciation would total $15,000 instead of $10,000. More funds would presumably be available for the new purchase; and the capital write-off is correspondingly lower.

Here are some key questions for management to ask about its equipment-financing policies and practices:

1. Have you a reasonably accurate estimate of the replacement cost of present machinery, equipment?
2. Has a recent appraisal been made of the going value of present plant and equipment?
3. Are you making some provision beyond depreciation based on original cost of equipment to help meet the cost of needed replacements?
4. Do your operating statements include the extra capital costs beyond normal depreciation that more fully reflect the real value or replacement value of equipment now in use? (Though such an extra charge above normal depreciation is not recognized as a tax deduction, its presence on the operating statement as a current cost helps focus management attention on a more realistic appraisal of cost and profit, will avoid underpricing.)
5. Have you earmarked or actually spent 50 per cent or more of recent net earnings on modernization? (While this is a rough yardstick, at best, the fact that leading firms have spent this, plus millions raised as new capital, suggests a warning: If your company has been paying out most of net earnings as dividends, it may have neglected replacement needs.)
6. Are you accelerating the write-off of recent additions to machinery or equipment? (Today's high costs increase the financial risks in early obsolescence. Accelerated depreciation on new investments cuts risk.)
7. Have you considered adopting depreciation charges that vary with production activity, instead of the common practice of basing depreciation

on equal yearly charges over machine life? (This is a technical problem in acounting and tax ruling, but it merits study. Within limits, a flexible depreciation rate that varies with activity is allowed as a tax deduction. Moreover, since high activity and high prices tend to coincide, this kind of depreciation more nearly reflects economic values than the straight charge over a period of years.)

8. Have you the cash or borrowing strength to finance needed equipment replacements?
9. In your plant has the responsibility for periodic equipment studies been assigned to some particular individual?
10. Do you maintain a record of repair and maintenance costs on important units of equipment? Do you keep records of other factors related to the problem of replacement, such as lost production time, spoilage, lost time on repairs, total machine hours worked during the year?
11. Are you taking full advantage of the advice and engineering services of machine and equipment suppliers? (This almost seems too obvious to ask, yet machine sellers report, almost to a man, that their salesmen know of many unused opportunities in customer plants for profitable replacement.)
12. Have you reviewed your "technological batting average"?

Companies that can answer "yes" to most of the foregoing questions can honestly claim to be keeping productive capital up to par.

Modern Industry, April 15, 1949, p. 40:5.

Working Capital Adequate for 1949-50, Survey Shows

AN adequate supply of working capital for 1949 and into 1950 is reported by all but "a very few" of the 175 manufacturing companies surveyed recently by the Conference Board. Most executives express satisfaction with their companies' present capital structure. Many point out that they "have nothing but common stock outstanding and no bank loans or other debts of any kind." Firms that have large amounts of capital tied up in inventories believe their capital structure will adjust itself as these inventories are reduced.

The current dearth of equity capital has forced many organizations to rely more heavily on retained earnings to furnish working capital and finance plant expansion. Current tax laws are most frequently blamed for the lack of equity capital, and executives believe that tax amendment and a "less hostile" attitude by government toward business might stimulate the flow. Meanwhile, management states it is directing its efforts toward winning over the confidence and good will of its stockholders, who are regarded as an important source of new capital.

High construction costs, executives assert, cut serious inroads into working capital, which in many cases was used for supplemental financing. Rather than go into debt, many manufacturers are simply deferring any further "desirable but not essential programs" and discontinuing any policy of employing working capital for any purpose other than current operations.

There is also a general antipathy toward borrowing in order to bolster working capital. Those in need of more working capital expect to get it from retained earnings, depreciation reserves, reduced inventories, lower accounts receivable; some even look to tax refund claims. Only a few say they are resorting to long-term loans or stock flotations.

Superman at the Board Table

IT'S just possible that by now youngsters of Marquette Cement Manufacturing Company employees are nosing through the firm's latest financial statement—at least, a boiled-down, sugar-coated version of the report. Recently Marquette sent a comic-book version of the annual statement to the homes of all employees, wherein three characters—Tom, Dick, and Harry, the Marquette Team—tussle with ordinarily complex corporation matters as if they were no more difficult than Monday morning quarterbacking. One feature of the four-color comic book is an assets-liabilities statement reduced to terms of a "one-man cement company"—an idea that any youngster might well grasp.

—*Commerce* 7/49

Accounting Treatment for Pensions

PENSIONS have jumped prominently into the national picture. As a result, there is a great wealth of material today available on how to establish a pension plan. Once the plan has been designed, however, the necessary approval secured from the Treasury Department, and all other formalities complied with for its adoption, the curtain seems to fall as though nothing more is needed and all is well.

But now comes the next act. This is the accounting for pensions—and one soon discovers that information on this subject seems to be as scarce as the other was plentiful. To throw some light on the matter, the Controllers Institute of America prepared a series of questions and sent them to a representative number of Institute members for response. Replies are summarized at the conclusion of this article.

The one aspect of accounting for pension plans which seems to have been clarified lately is the treatment of past-service contributions. The S.E.C. in their annual report for 1947 expressed their opinion on this subject, as follows:

> Where the plan provides for the purchase of annuity contracts from an insurance company or the establishment of a trust fund, in either case based on past service of eligible employees or former employees or former employees now on pension, considerable diversity of opinion as to the proper accounting has been found. The funding of pension costs for past service may be accomplished by lump sum or installment payments to the trustee concurrent with payments covering accruals for the current year. Payments covering the current year are clearly profits-and-loss charges. Payments based upon past service of employees currently on the payroll are claimed by some to be proper charges to earned surplus on the grounds that the payment is for service rendered in prior years. Others, including the Commission's staff, have considered such payments to have been made for a current benefit in the form of better employee relations, reduced labor turnover, and similar benefits currently and in the future, and hence have felt that they should be charged to profit and loss.
>
> However, where the payments were substantial and would have seriously distorted current income figures, no objection has been raised to direct charges to earned surplus, although even in this situation, the preferred method would seem to be to treat these items as extraordinary charges to profit and loss. Further study is being given to all phases of the problem with a view to obtaining consistent and informative financial statements.

The American Institute of Accountants devoted an entire bulletin (Number 36) to the attitude of the profession on this point. The gist of the conclusion can be summarized in the following paragraphs quoted from the bulletin:

> The committee, accordingly, is of the opinion that:
>
> (a) Cost of annuities based on past services should be allocated to current and future periods; provided, however, that if they are not sufficiently material in amount to distort the results of operations in a single period, they may be absorbed in the current year.
>
> (b) Costs of annuities based on past services should not be charged to surplus.

The survey of the Controllers Institute seems to indicate that the majority of the companies contacted are following the treatment recommended above, i.e., that past-service contributions are more properly a charge to current operations than a charge to surplus.

The accountant faces a number of other problems, however, e.g., the problem of where to charge the cost of contributions for current service. Several alternatives present themselves: (1) You may charge the entire amount to general and administrative expenses on the theory that this is a cost impossible of proper allocation and one from which the company as a whole benefits. (2) You may allocate the cost departmentally, on the basis of number of pensionable employees in the department—a method, however, that would

unduly burden departments having many pensionable employees. (3) You may allocate the cost departmentally as a percentage of the total payrolls. This last method has the advantage of not penalizing a department for having a large number of pensionable employees and yet securing an allocation in which all departments share, much like the cost of other general welfare expenses, such as the cost of the company cafeteria, first aid service, or insurance plans. Other methods of allocation can be suggested. The foregoing serve merely to point out the variety of treatment possible. Much will depend on the size of the current service contributions and their relative importance to the total cost of doing business.

Another problem is the treatment of the past-service contributions, assuming they are not charged to surplus. Here again several alternatives present themselves, especially as this is an expense which will be amortized over a limited period of years.

(1) Charge the cost to other income and expenses, because of its transient nature and the possible distortion of ordinary expenses if included among them.

(2) Charge the cost to general and administrative expense, because it is a properly incurred expense no different from, let us say, administrative salaries and considered equally necessary to running the business.

(3) Allocate it as outlined in sections two or three for current-service contributions. These last two treatments seem to have one principal objection. This item can be very substantial and because of the transient nature of the expense may seriously distort costs.

Here again the extent of the past-service contributions and the length of time over which they are to be paid seems to be of primary importance in determining the appropriate treatment in each individual case.

The third problem is the treatment of pension costs in company statements and reports. A review of a great number of company reports discloses that in the majority of instances little if anything is said about pension costs. Where mention is made, it is usually confined to comments in the president's letter, but seldom is anything shown in either the published income statement or balance sheet.

The Institute's questions were formulated with all these specific problems in mind. The findings are presented below.

1. Past-service contributions are treated as: (a) a charge to surplus—by 8 per cent of respondents; (b) a charge to current expenses—by 92 per cent.

2. Under income tax regulations, one-tenth of the total past-service liability may be charged off each year, thus producing substantial savings in income taxes. How is this income tax saving treated? (a) as a credit to the income tax provision against regular current earnings—91 per cent; (b) as a credit to surplus—9 per cent.

3. How are current-service contributions treated: (a) as a single item charged to some general account—36 per cent; (b) charged to the individual departments where the members of the pension plan are employed (similar to F.O.A.B. and Compensation Insurance)—60 per cent; (c) other treatment (specify)—4 per cent—charged to locations but not departmental.

4. If past contributions are charged as a current expense, is this expense treated: a. in a similar manner to current-service contributions, as per Question 3 above—79 per cent; b. otherwise (specify)—21 per cent [(1) Charged to miscellaneous income and

expense. (2) In internal accounting, charged to general management; in published reports, charged to "other charges." (3) Charged to general administrative expenses.]

5. If a trustee plan is in operation, how are payments made to the trustees for: a. future-service contributions—annually, 50 per cent; monthly, 50 per cent. b. past-service contributions—annually, 50 per cent; monthly, 33 per cent; made over reasonable period of years, 17 per cent.

The survey does not pretend to cover the entire country, but it embraces a variety of industries and thus may be of more value than could be a survey of a larger but less varied group of companies.

By HENRY KEYSERLING. *The Controller*, April, 1949, p. 157:2.

Insurance

Effect of Normal Retirement Age on Pension Cost

THOSE who place the emphasis on the human aspect of pensions—as distinguished from the business aspect—often contend that workers do not live long enough after the customary retirement age of 65 to enjoy the benefits of a plan.

This opinion is shared by many of the younger participants of pension plans. They fail at the outset to appreciate a benefit deferred so long, nor do they feel it is worth the sacrifice imposed by deductions from their pay, if the plan is contributory. But just as eligibility is often restricted in pension plans to reduce the cost,* so a retirement age of 65 rather than some younger age is usually chosen for the same reason.

An employee 40 years of age obviously has a better chance to live to age 60 than to age 65. According to one of the mortality tables used extensively in estimating the cost of pension plans, 13 per cent of the men living at age 60 die during the next five years. According to this table, a man at age 60 has an average life expectancy of about 16½ years. When he reaches 65, his average expectancy has been reduced to about 13⅓ years.

But the variance in life expectancy at two possible retirement ages is not the only cost factor involved. A pension, as a general rule, is not funded by a lump sum payment at retirement age, but rather by annual contributions during the years of the participant's membership in the plan. If the amount of retirement income beginning at 60 is to be the same as that beginning at 65, the beneficial effect of compound interest on the accumulated deposits is reduced. The loss due to that cause increases with the interest rate. The combined effect of the various factors mentioned—more pensioners, greater longevity, and less interest—has generally been found to be a 50 per cent higher pension cost if participants are to retire at 60, instead of 65, on the same pension.

In many retirement plans, the pension is figured by multiplying a small percentage of a participant's salary (say 1 or 2 per cent) by his years of

* See THE MANAGEMENT REVIEW, "Effect of Eligibility Provisions on Pension Costs," August, 1949, pp. 456-8.

membership in the plan. In such case, an earlier retirement age automatically reduces the pension. Consequently, the impact on interest earnings of the shorter period of accumulation is partly offset. Yet the fact remains that even this smaller pension must be paid over a longer span of life. The cost of such a plan might well be from 20 to 25 per cent higher, if 60 instead of 65 is to be the normal retirement age.

Many of the older pension plans provide for a younger retirement age for women than for men. It is outside the scope of this article to discuss the merits of earlier retirement for women. But because of the greater life expectancy of women, the cost of retiring them at 65 is about 25 per cent greater than the cost of retiring men at 65. If the female retirement age is reduced to 60, the approximate cost of their pensions is 80 per cent higher than the cost of male pensions commencing at 65.

In the past, most organizations have not been too seriously affected by this difference in cost—only a small number of women had to be pensioned. Remember, however, that 40 years ago—when people who are today retiring were hired—the number of women in business was considerably lower than it is today.

In discussing retirement age as a factor of cost, it is logical to give some thought to possible future trends. The belief seems to be widespread that within our time retirement at 60 or even earlier will become the accepted standard, just as we have seen the workweek reduced to 40 hours, and even less in certain occupations. Such a trend would naturally mean higher pension costs in the future.

It is not at all certain, however, that many added years of leisure will be desired by the majority of older people. Nor is it likely that the economy as a whole can spare the experience and mature judgment of older men and women even though a high standard of production might be maintained by a smaller number of employed. Furthermore, it is quite possible that the eventual conquest of certain diseases which now take a heavy toll of people in late middle age may add years to the average life expectancy of pensioners. Therefore, 20 or 30 years from now, it may well be more expensive to retire employees at 65 than it is now, and the span of a man's working life may be lengthened instead of shortened.

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The Need for Products Liability Insurance

TODAY the majority of large retail organizations will not handle products unless the manufacturer can furnish them with evidence of products liability insurance. To find out some of the leading retail organizations' methods of handling products liability, a *Casualty Insuror* reporter recently visited four large New York retails, came up with the following facts:

Company A is a large retail organization having over 1,000 stores spread over the United States. This company has a standard purchase contract which contains a "hold harmless" clause. On more hazardous products, including

corrective footwear, this firm does require evidence of products liability. Company A had a suit brought against it not too long ago. The company quickly referred it to the textile manufacturer from whom it had bought the goods. The manufacturer referred the case to the textile producer, and he in turn back to the firm which had put the sizing in the material. Here lay the final responsibility.

Company B is a mammoth New York retail firm. Only where there is a written contract between this company and the manufacturer is products liability brought into the picture. In other cases, products liability must be furnished only when the product is hazardous or the experience has been poor. Of course, if a product is unknown, products liability may also be required.

Company B's bureau of standards and laboratories very often eliminates necessity of considering products liability by turning down a product from the start. For example, there was a series of liability actions brought against a firm which made highly inflammable playsuits. Company B never bought or sold any of these particular playsuits because its bureau of standards would not pass them. If a complaint is made to Company B by a purchaser, the complaint is passed right back to the manufacturer. For example, if someone's dental bridgework is broken by a piece of candy, the complaint is referred back to the manufacturer of the candy for his proper settlement.

The two other companies visited require products liability only on hazardous products.

It must not be forgotten, however, that even lending one's name to a product leaves the way open for liability. Therefore, the need of products liability is not determined by whether or not the product is made by the insurance buyer. He needs only to sell or handle it.

The Casualty Insuror, July, 1949, p. 5:1.

Survey of Books for Executives

ENTERPRISE IN A FREE SOCIETY. By Clare E. Griffin. Richard D. Irwin, Inc., Chicago, 1949. 583 pages. $5.00.

*Reviewed by Leonard W. Trester**

The main thesis of this book is that what modern society needs most is an adequate and increasing supply of enterprise. The author analyzes our economy from the standpoint of the incentives it offers for enterprise and seeks to determine whether these are sufficient to support needed expansion of production.

The book is divided into three parts: The first section is devoted to a study of the incentives and motivations which influence expansion of business in this country. The second part outlines the conditions necessary to maintain a favorable climate for business expansion. The final section formulates a philosophy of a free society and the role of free enterprise in it.

Professor Griffin squarely recognizes that a climate of confidence and freedom from unnecessary government controls and discriminatory taxation is a prerequisite if the benefits which are possible under our economic system are to be realized. Those benefits, he emphasizes forcefully, accrue to the entire population. The tendency in recent years toward "groupism" to obtain special privileges for organized segments of the population is not only self-defeating but inhibits the very quality of enterprise which alone can provide the greater human satisfactions for which all are striving. Under our system, he points out, no class can benefit at the expense of others; "we have seen that the long lines of unemployed go hand in hand with ruined fortunes and reputations, bank failures and farm foreclosures."

Economic education is needed to give the

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public an understanding of how the system operates. Not economic education of the sort so popular in some schools, which emphasizes class conflict, but education which shows how enterprise and profit are the dynamic factors which produce good wages, abundant goods and high levels of employment. Unless people have well-founded faith in our system and well-founded optimism about its potentialities, the very elements which inspire enterprise will be lacking. He buttresses this point with a quotation from Sumner Slichter to the effect that "a nation of security seekers is pretty certain to suffer from stagnation."

He makes apparent the need for the development of a doctrine positively affirming the values of the free system. There is a tendency, he feels, to underrate the influence of the thinking of intellectual leaders because its impact on mass psychology is not direct. Nevertheless such intellectual concepts do come to provide the frame of reference for social and political measures affecting a whole economy. As examples of this, he cites Karl Marx and the effects of the "mature economy" theory in this country in the '30's.

The doctrine for free enterprise, he believes, is the true philosophy of liberalism. Such philosophy must recognize that capitalism cannot remain static and thus must emphasize maximum opportunities but unequal rewards commensurate with the risks and efforts involved. The "abundant life," the true liberal realizes, is a highly individual thing which cannot be legislated. The good society is one in which people are as free as possible to seek the ends which to them seem good. Thus true liberalism, or individualism, recognizes that liberty is itself a desirable end and that the advancement of the one is the advancement of the whole group.

The antithesis of this philosophy is the welfare state, which instead of relying on individual industry, foresight and thrift, believes that the well-being of the individual is advanced when those in authority can by pressure and coercion require him to act positively in such a way as they believe will benefit society.

The true liberal, recognizing that increased production of desired goods is still the number one economic problem of all societies, believes that the way to accomplish this is by making production attractive through wages, profits, interest and rents.

The liberal approach is to seek to preserve civil and human rights, to disperse concentrated group power, to foster competition, to strike a balance between humane security measures and necessary incentive for improvement, and to promote freedom of opportunity in education.

This volume serves the purpose of being a valuable reindoctrination of the business man in the fundamentals of our system as well as providing a clear exposition for others of the benefits inherent in that system. It might well be used as a basis for the development of economic education programs by business firms and groups.

PUBLICATIONS RECEIVED

(Please order books directly from publishers)

THE CHALLENGE OF BUSINESS EDUCATION. School of Business, University of Chicago, 1949. 53 pages.

THE ANNUAL REPORT: *Booklet No. 1 of Series on Managing Business with the Help of Printing.* S. D. Warren Company, Boston. 84 pages.

PRINCIPLES OF ACCOUNTING: *Introductory.* By H. A. Finney. Prentice-Hall, Inc., New York, 1948. Third edition (revised). 670 pages. $5.65.

READINGS IN SOCIAL SECURITY. Edited by W. Haber and W. J. Cohen. Prentice-Hall, Inc., New York, 1948. 634 pages. $7.65.

A SURVEY OF ACCIDENT AND HEALTH COVERAGE IN THE UNITED STATES. Committee on Survey of Accident and Health Business, 165 Broadway, New York 6, N. Y., 1949. 16 pages.

STUDIES IN DISABILITY INSURANCE: *II. The Nature and Extent of Voluntary Disability Insurance in New York State.* Division of Research and Statistics, State of New York Department of Labor, 80 Centre St., New York 13, N. Y., 1949. 38 pages. Gratis.

DISCUSSION LEADER'S MANUAL FOR "TIME-STUDY FUNDAMENTALS FOR FOREMEN". By Phil Carroll, Jr. Available from the author at 6 Crestwood Drive, Maplewood, N. J. 42 pages; loose-leaf, leatherette binding. $2.00.